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"The Cellulose Age"

EDITORIALS

Ground Is Cut Under Krug Again

The ink was hardly dry in the papers and magazines that recently published the indignant protests of Interior Secretary Krug that he is all-out for a pulp and paper industry in Alaska and his denial that his department interfered with sales of Alaska pulp timber, before his own newest assistant secretary confirmed what has been said all along in this magazine which is exactly opposite to Mr. Krug's assertions.

In a chamber of commerce speech a few weeks ago, Assistant Interior Secretary William E. Warne blandly proclaimed he is in favor of "negotiating" with the Alaska Indians to decide who owns the timber in the territory.

Mr. Warne has simply echoed former Secretary of the Interior Ickes and thereby made it impossible for private capital to risk dealing with the Forest Service for Alaska timber. Way back when Secretary Krug first came into office he promised a quick settlement of the Ickes-inspired "aboriginal" Indian claims through federal courts.

But there has been no real change in the picture. For years the Interior Department has been trying to wrest control of Alaska's timber from the Department of Agriculture (the U. S. Forest Service), partly by inciting Indian lawyers and Indian lobbyists to sabotage the Forest Service attempts to start a pulp and paper industry.

Is it any wonder that the spokesman for an experienced, private group who wanted to build a pulp mill in Alaska, told the Forest Service—first, settle your controversy with the Agriculture Department and the Indians as to who owns the timber, then we will be glad to negotiate with the legal owner.

Spurred on by the Interior Department, an Indian lawyer recently had the effrontery to write an executive of a group who wanted to build a mill in Alaska, "warning" him that he would have to deal with the Indians as well as the Forest Service.

An Unrealistic Proposal from Geneva

An international committee on Freedom of Information in Geneva has adopted a resolution calling on American newspapers to reduce their newsprint consumption by 50,000 tons a year to make paper available to China, France and other countries in short supply.

Quite understandably, the U. S. newspapers object to this and unquestionably they will not give up any of this tonnage voluntarily. They are suffering now from their own short-sighted policies in virtually destroying the American newsprint industry.

This committee sitting in rare atmosphere of Switzerland is being very unrealistic. It is the popular and easy way to ask the U. S. to share its goods. The committee ignores the fact that over 1,700,000 tons (annual) of paper machine capacity in the world is standing idle. For instance, Sweden is using only 303,000 of 365,000 tons and Finland only 331,000 of 548,000 tons, and these countries are selling pulp abroad at the rate of more than two million tons annually. Russia is estimated to be using only 200,000 tons of 300,000 tons capacity. None of China's 86,000 tons capacity is being used. These are figures gathered by the Newsprint Association of Canada.

"It has been said that every event from birth to death, of an individual or a corporation, requires paper in some form or other."—D. K. Brown, President, Neenah Paper Co., and former President of APPA.

Insurance Company Invests in Paper

Some of the most instructive and interesting reading that one can find these days is in the annual reports of great American enterprises.

A boost for the pulp and paper industry is found in the pages of the 90th annual report of the Northwestern Mutual Life Insurance Company, whose total admitted assets in 1947 were $2,156,000,000, with income for the year of $323,000,000. Average rate of earnings after deduction of investment expenses: 3.01%.

Well, here's what President Edmund Fitzgerald of this company had to tell his investors: "During the years of railroad expansion in the last century and early part of this one, funds of policyholders contributed to those great projects . . . when agricultural expansion was spreading, millions in life insurance funds helped finance those efforts . . . when wire communications developed, life insurance savings helped finance them . . . when electric power revolutionized America, policyholders' funds made much of that development possible . . . during both World Wars, large sums were invested in federal securities. . . .

"NOW that the demand is somewhat less in many of these fields, we have turned to other basic industries, to pulp and paper, oil and food, and have invested in them."

It is very interesting that President Fitzgerald mentions pulp and paper in the first position of 1948 investment.

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WATCH FOR THESE ILLUSTRATED FEATURES IN OUR NEXT ISSUE—
Latin America's Outstanding Pulp and Paper Company
A Quality Kraft Mill in Florida Gets Into Production

PORTLAND, ORE., GETS 1949 MEETING

A National TAPPI Convention—the third one to be held on the Pacific Coast—will be convened in Portland, Ore., during the week of Sept. 5 (Labor Day) or Sept. 12 in 1949. Plans to hold the meeting in August had to be abandoned because of hotel difficulties.

This was perhaps the most important decision taken at the third successive annual joint TAPPI-Superintendents convention at Gearhart, Ore., May 6-8.

The national executive committee of TAPPI previously had left it up to the Pacific Coast Section to decide the site and time for the big 1949 conclave. On the final day at Gearhart, the Coast Section's executive committee met in the presence of President Wilbur F. Gillespie of TAPPI and three other members of the central national organization. With advice and counsel from these four, the Coast committee decided that:

1. Portland was the more practical site for the 1949 meeting, having several advantages over Seattle, the only other location considered.

2. While the meeting is expected to be an all-inclusive Annual Fall Meeting for TAPPI, it will be held toward the end of summer, rather than in the autumn, in the hope that good weather will favor visits to woods operations and scenic spots in the Far West.

3. Technical sessions will be held for two days only, Sept. 6-7 or Sept. 13-14. Papers will be presented on alkaline and acid pulping, engineering and papermaking and possibly technical phases of labor relations and management problems.

4. Mill trips will be highlighted by visits to the unique pioneering Mg (magnesia base) recovery plant just now starting up in connection with the Weyerhaeuser sulfite pulp mill, at Longview, Wash., 50 miles north of Portland; to the Weyerhaeuser logging operations near Longview, and new examples of "salvage" logging in the Portland vicinity; and to what has been called the most diversified big mill or biggest "specialty" mill of the industry at Camas, Wash., where two new paper machines have been installed by Crown Zellerbach Corp. Camas is just 17 miles from Portland and both Weyerhaeuser and Crown have also built new kraft mills and also new 7- and 8-stage bleaching plants at Longview and Camas. Whole big log hydraulic barking and chipping at several mills and modern machinepaper coating at West Linn, Ore., 13 miles south of Portland, and other attractions combine to make Portland, Ore., one of the most desirable convention sites anywhere in the pulp and paper world right at this time.

Predictions that upwards of 800 may attend the sessions in Portland were made by members of the committee. In the Far West the bulk of superintendents are also members of TAPPI, which will swell the local attendance. A special train will take many from the East and South and it is anticipated that a large percentage of these visitors will spend their 1949 vacations in the Pacific Northwest. Labor Day falls on Sept. 5 in 1949 and it was believed this would make it possible for many to go West then or just afterwards. Committees for the Convention are already being organized.

COMING INDUSTRY MEETINGS

Western Branch, Canadian Technical Section—Ocean Falls, B. C..... May 26-27

N. Y. Pulpmen's Golf Assn.—Winged Foot Club, Pelham, N. Y. .....June 8

Envelope Mfgrs. of America—White Sulphur Springs, W. Va..... June 10-11

Waxed Paper Institute—Homestead, Hot Springs, Va.,..... .....June 10-11

National Paper & Twine Assn.—French Lick Springs, Ind..... ..... June 11-12

Northwestern Div., Supts. Meeting—Northlands and Beaumont Hotels, Green Bay, Wisc. .....June 18-19

TAPPI Kalamazoo Valley Section, Annual Meeting and Golf — Gull Lake Country Club, Gull Lake, Mich. .....June 22

Sports and Field Day, Michigan Supts.—Gull Lake Country Club, Kalamazoo, Mich. .....July 20

TAPPI Plastics Conference—Institute of Paper Chemistry, Appleton, Wis. .....Aug. 16-17

TAPPI Fundamental Research—On "Physical Constituents of Wood," Madison, Wis.....Aug.18-20

Technical Section Canadian Assn.—Harrison Hot Springs, B. C..... .....Sept. 8-9-10

Northeastern Wood Utilization Council—Boston .....Sept. 17

TAPPI (U. S.) and Canadian Tech. Section, Mechanical Pulping—Poland Springs, Maine.....Oct. 11-13

TAPPI Testing Conference—Mellon Institute, Pittsburgh, Pa. .....Oct. 11-13

Southern and Southeastern Supts. Divisions Joint Meeting—Atlanta Biltmore Hotel, Atlanta, Ga..... .....Oct. 21-23

TAPPI Engineering Conference—Buffalo, N. Y.....Oct. 25-28

National Paper Trade Assn.—Hotel Stevens, Chicago..Oct. 28-30

Paper Industry Salesmen—Midston House, New York City—Every Monday, 12 noon to 2 p.m.

Allied Industries Luncheon Club—Second Monday of month, 12 noon, Commodore Hotel, New York.

JACQUES MOUILLEFARINE, secretary-general of Manufactures Papetieres du Maroc, 2 Rue de Versailles, Casablanca, was a visitor in the New York office of **PULP & PAPER** in May. He is making a tour of eastern and midwest mills in connection with his company's interest in wheat straw pulp and in preparation of waste paper for pulping.

ALEXANDER BERZINSH, who until last year was managing a paper mill in Hamburg, Germany, has joined the technical staff of Bowater's Newfoundland Pulp & Paper Mills at Corner Brook, Newfoundland. While operating a comverting plant in Latvia he produced boards which won the grand prize at the Brussels world exposition in 1935.

JAMES R. LIENTZ, who has been promoted to General Superintendent of the Pulp & Paper Division of Union Bag & Paper Corp., Savannah, Ga. He was formerly Supt. of the Technical Dept., and prior to that was with Swenson Evaporator Co. in Harvey, Ill. He succeeds Bruce Martin who resigned to accept a position in Grand Rapids, Mich.

Lake States TAPPI

Alfred M. Heald of Marathon Corp., Menasha, Wis., was elected chairman of the Lake States TAPPI for the coming year when that group went to Wisconsin Rapids, Wis., for its May 15 meeting.

George R. Sears of the Institute of Paper Chemistry in Appleton, was elected vice chairman and Henry C. Crandall of Mosinee Paper Mills, Mosinee, Wis., was chosen secretary-treasurer.

Alan P. Adrian of Neenah Paper Co., Herbert Rowe of Nekoosa-Edwards and Charles Wagner of Marathon, Menasha, were elected as additional executive committeemen.

Fred Trenk, extension forester at the University of Wisconsin, discussed pulpwood production by small timber owners at this meeting.

New Manhattan Group

For some time there has been talk of organizing a TAPPI section which would take in membership from a radius of 50 miles of Manhattan. Last month the national group authorized the organization to go ahead on the formation of Empire State Section of TAPPI, Metropolitan Group. Heading up the organization is Henry J. Perry of Frederic C. Clark Associates, 50 Church Street, New York 7, and a meeting for this month is planned. Membership for the present will be restricted to members of national TAPPI; annual dues, $1.50; and membership will be in the Empire State Section and subject to its rules and regulations.

TAPPI Meetings

The TAPPI Plastics conference at the Institute of Paper Chemistry, Appleton, Wis., on Aug. 16 and 17 will emphasize resins and plastic coatings.

The next two days, many attending will go to Madison, Wis., for the Fundamental Research Conference on the Physical Nature of the Components of Wood, Aug. 18-20.

IN INDUSTRY NEWS (left to right):

RAGNAR FROLANDER, Manager of Kramjors Co. (affiliated with Swedish Cellulose Co.), Sweden, was recently caught by the camera of a PULP & PAPER editor in Mexico.

SVEN FAHLGREN, of Bird Machine Co., whose own home is in the country 6 miles from the South Walpole, Mass., plant, traveled to the Pacific Coast for the first time since before the war. He is an authority on Jonsson Knotters and reported they save about 3 tons of pulp per day in one big mill.

GEORGE W. BRODLEY, paper machine builder for Pusey & Jones, was in charge of installation of the machine built by that company at Union Bag & Paper Corp. This was the fifth machine for Union Bag.

BRUCE MARTIN is the new Manufacturing Manager for American Box Board Co., Grand Rapids, Mich. He was formerly General Superintendent for Union Bag & Paper Co.'s mill at Savannah, Ga.

NEW ORLEANS CONVENTION
Ray Bennett Is Initiated

The Superintendent's National Convention at New Orleans was right on the brink of disaster on that critical day in May when the railroad union and government officials were deciding whether trains would run or not.

Hundreds of reservations of New Orleans-bound superintendents and their affiliates hung in the balance. When the strike was postponed it made it possible for the big spring meeting to go full steam ahead at the New Orleans Roosevelt Hotel and it began Wednesday, May 19, with a jam-packed program of wide interest. Next month a detailed account will be published in **PULP & PAPER**.

Migratory Peddlers

One of the highlights of the meeting was the initiation of President Ray Bennett of the Superintendents as an honorary member of the "International Brotherhood of Migratory Peddlers" at the breakfast "fun" session on May 21. This is an organization formed several years ago in Portland, Ore., by equipment and supply salesmen for the purpose of working, behind the scenes, and anonymously, to assist the industry and to help make its association meetings a success.

A New Orleans "Waiting Room No. 3" was formed as another division of the brotherhood which has similar units in Seattle and Portland.

Ray Smythe, veteran representative of Rice, Barton, Heppenstall and other companies on the Pacific Coast, and Larry Smith, manager of **PULP & PAPER**, were director and assistant director of the initiation. Milton Maguire, manager of the Portland, Ore., plant of Hercules, and A. G. Natwick, assistant resident manager of Crown Zellerbach Corp., and also an honorary member, with the new members in the South, participated. The membership of this No. 3 Waiting Room follows: George Witham, Orr Felt & Blanket Co., Mobile, Ala.; C. O. Kingsbury, Solvay Sales Corp., New Orleans; William Stitt, Buckman Laboratories, Memphis, Tenn.; L. A. Thompson, Hercules Powder Co., Atlanta, Ga.; W. W. Henderson, W. W. Henderson & Sons, Pensacola, Fla.; Gene Brechard, Appleton Machine Co., Atlanta, Ga.; Norman Weil, Tyler Co., New York, and F. S. LaPeyre, Murray-Baker-Frederic Co., New Orleans.

Longview Fibre Builds Los Angeles Plant

The Longview Fibre Co., of Longview, Wash., is building a new box plant in Los Angeles. A. D. West, the resident manager, is expecting to start up a corrugating machine in the new plant around Aug. 1.

Balance in 1948 Forecast at NPA Meet

A balancing of supply and demand for most paper grades as 1948 progresses was predicted by President George E. Dyke of Robert Gair Inc. in his presidential address at the National Paperboard Association meeting in Absecon, N. J., recently.

It will be achieved by a 4% or 5% increase in output this year, he said.

An interesting report on wood pulp was made by Alan G. Goldsmith of The Mead Corp., who said: "The big question mark is the European Recovery Program and our rearmament program and the extent this will effect shipments from the U. S. Rearmament may bring a revamping of packaging requirements and increased consumption of paper and board requiring more virgin pulp."

Field Day in Michigan Will Be July 20

The annual Sports and Field Day at the Gull Lake Country Club, Kalamazoo, Mich., the big fun day for the Michigan Superintendents, is scheduled for Tuesday, July 20.

Luncheon will be at the clubhouse and golfers will tee off at 1:00 p.m. sharp, say the sponsors.

There will be all kinds of lawn games for the non-golfers and plenty of Chinese Papermakers' money supplied by the Ancient Order of Chinese Papermakers, Kalamazoo local, for the day's fun. There will be an oasis somewhere on the course, and this is no mirage, according to authoritative information. Dinner will be at 7:30 p.m. A short business session will follow to elect officers for 1948-49, after which prizes will be awarded.

Committee in charge:

Paul W. Bartholomew, Hawthorne Paper Co., chairman; Lester J. Smith, St. Regis Paper Co., and Roy W. Holden, Stowe-Woodward, Inc.

IN INDUSTRY NEWS (left to right):

WILLIAM PITTAM, Engineer at Longview, Wash., for Weyerhaeuser Timber Co., has been assigned to their new Springfield, Ore., pulp and board mill, during construction, as assistant to Otto Schoenwerk, Consulting Engineer, according to Howard Morgan, Pulp Division Manager at Longview.

B. D. WARREN has been appointed Assistant Sales Manager of Bird Machine Co., South Walpole, Mass. Mr. Warren has been associated with the company for 22 years. He graduated from Massachusetts Institute of Technology in 1924.

FRED OXENBURY is the newly appointed Assistant Purchasing Agent for Pacific Mills, Ltd., with offices in Vancouver, B. C. He joined the company in 1927.

ROBERT M. YOUNG has been elected Vice President of Pond's Extract Co., 60 Hudson St., New York City. He is head of the division manufacturing tissues. As manager of that division Mr. Young joined Pond's in 1943. Previously he was with Scott Paper Co., Chester, Pa., from 1931 to 1943.

IN INDUSTRY NEWS (left to right):

A. P. SCHNYDER joined Ebasco Services, Inc., as Engineer for pulp and paper mills. He was with Geo. F. Hardy for 20 years. He graduated from Federal Technical University in Zurich in 1921.

PAUL R. OLIVER has established offices at 2039 Santa Fe Ave., Los Angeles, Calif., as West Coast Manager for Farrel-Birmingham Co., Ansonia, Conn., and Buffalo, N. Y.

D. J. FAIR, who has been servicing paper mills in North Louisiana for Brown Instrument Div. of Minneapolis-Honeywell Regulator Co., now in charge of a sub-office at 940 Market Pl., Shreveport, La.

COURTNEY H. REEVES has been appointed President and General Manager of Carter, Rice & Co. Corp., a subsidiary of Bulkley, Dunton & Co., New York. He has spent almost 30 years in the manufacturing and merchandising end of the paper business, coming from Allied Paper Mills of Kalamazoo, where he was Vice President. He also served for six years as director of sales of Paper Mills Co., Chicago.

MEETING IN ATLANTA
Two Superintendents Divisions

The Southern and Southeastern Divisions will this year, as in the past few years, hold a joint meeting on Oct. 21, 22 and 23 at the Atlanta Biltmore Hotel in Atlanta, Georgia.

Hotel reservations for this meeting should be made directly with the Atlanta Biltmore Hotel, with a carbon copy forwarded to the Southeastern Division secretary, R. C. Bullock, pulp mill superintendent, Ecusta Paper Corp., Pisgah Forest, N. C., on a first come first served basis. The hotel has requested that members who plan to attend this meeting make reservations as soon as possible and that they be informed that no reservations will be accepted later than Oct. 11.

A mill visit and special ladies' program will be held with a football game between two of the South's leading colleges, Georgia Tech and the University of Florida, on the final Saturday afternoon.

Rothermere's Speech Disturbing to Publishers

Several hundred Associated Press executives were gathered recently at the Waldorf in New York to celebrate AP's centennial. At an anniversary luncheon they applauded and cheered the introduction of Lord Rothermere, publisher of the London Daily Mail, the Evening News, and the Sunday Dispatch. But a few minutes later they were looking off into space and frowning in discomfort.

Reason: The Viscount was saying emphatically that European newspapers must be given more newsprint so that "the battle for freedom" can be fully reported. He was disappointed that the Marshall Plan ERP made no specific reference to newsprint. English newspapers, he said, were faced with a "worsening" condition, may go from four pages daily to two. Then he let go a humorous but barbed shaft: "It would be idle to pretend that some regret at newsprint's exclusion from the Marshall Plan did not pass through my mind as I lay in my bedroom yesterday morning and sought to massage some life into my legs which had become crushed with the stupendous weight of your Sunday supplements."

Lord Rothermere had flicked open a point which many observers in the industry have felt for some time: That aid to Europe would eventually make deep demands on the paper supply, despite existence of over a million tons of idle paper machine capacity in Europe.

Wilkes Is Manager At Atenquique Mill

Stanley A Wilkes, who helped start up National Container at Jacksonville, Fla., as assistant superintendent, has succeeded David Kuhe as plant manager of the Compania Industrial de Atenquique, at Atenquique, state of Jalisco, Mexico.

Mr. Wilkes, native of Buffalo, N. Y., and with 15 years in Southern Kraft Division mills in the South as well as Wisconsin, Oregon, and Vermont mills, has been the paper mill superintendent at the new kraft pulp and paper mill in Atenquique since its start-up in 1947.

International Increases Capacity by 469,000 Tons

When appropriations aggregating $47,356,000 have been expended and work completed in expansion of International Paper Co. Mills, their capacity will be increased from 3,131,000 tons per year to approximately 3,600,000 (an increase of 469,000 tons), R. J. Cullen, chairman, told stockholders in New York on May 12.

A. T. HURTER, of Stadler, Hurter & Co., Montreal, Canada, returned recently from a trip to England and Switzerland, visiting friends in the pulp and paper industry.

Paper Course Planned At Western Michigan College

Western Michigan College in the first semester of 1948 will add a four-year course in paper technology, with bachelor of science degree, patterned after similar courses at the University of Maine and New York State School of Forestry at Syracuse, N. Y.

Papermaking laboratories will be equipped with modern machines at Western Michigan.

The new educational course will be conducted with supervision of an advisory committee, comprised of Max Bardeen of the Lee Paper Co., Dwight Stocker of the Michigan Paper Co., William Kirkpatrick of the Allied Paper Mills, Paul Bartholomew of the Hawthorne Paper Co., A. L. Sherwood of the Sutherland Paper Co., Rudolph Germanson of the Kalamazoo Vegetable Parchment Co., Ernest E. Ludwig of the Birmingham and Prosser Co., and Dr. Gerald Osborn and Dr. Deyo B. Fox of the college.

Washington Satisfied With Industry Liaison

In its May issue **PULP & PAPER** indicated that leaders in the industry were giving thought to a hypothetical Washington organization which might be activated in the event of emergency or war. How much of this trend was foresight on the part of the industry and how much issued from informal pressure via the nation's capital was difficult to determine. But during May the pressure seemed to have eased in the minds of both Washington and the industry.

At any rate, Washington officials expressed themselves as satisfied with the Advisory Committee which AP&PA has long had in liaison with the Department of Commerce. For the time being, it was reported, this would be sufficient.

Nevertheless, many an association secretary and some industry leaders were making extra trips to Washington, just to "keep in touch."

Safety Record At Fibreboard Mill

O. Hallburn, manager of the Southgate (Los Angeles) Division of Fibreboard Products reports a remarkable safety record at this plant. It had gone nine months without a lost-time accident, as of May 9.

Credit for this record should go to the Pacific Coast Joint Labor-Management Safety Conference, which was organized in 1946, he declared, for safety-consciousness among the employes, and also to Earl White, head of the union safety committee; Forrie Hill, safety director, and E. Connor, plant engineer and safety director for the company, who put the safety suggestions into effect.

DR. G. H. TOMLINSON, of Howard Smith Paper Mills, Montreal, and director of that company's research, has been awarded the gold medal of the Society of Chemical Industry for his work in connection with woodpulp and pulpmill "waste" utilization.

NEW BLEACH PLANT at The Mead Corp. mill in Chillicothe, O. Equipment for this plant was supplied by Improved Paper Machinery Corp., Nashua, N. H., but engineering and construction was done by Mead engineers under George H. Pringle, Assistant Chief Engineer of the corporation.

MEAD'S BLEACH PLANT

Permits Wider Use of Wood Species

Bleached soda pulp used at the Mead Corp., Chillicothe, Ohio, will be turned out at the rate of 115 tons per day as soon as the new digester in No. 2 soda room is completed.

The corporation is now handling 100 tons per day which has been made possible by the addition of a new, triple stage, 150-ton capacity, pulp bleaching plant. This new plant has been in operation since March and is handling all of the soda pulp manufactured at the Chillicothe division. Improved Paper Machinery Corp. supplied equipment.

The "brown stock" from No. 1 soda mill is now being pumped a distance of 2,000 feet through piping to a storage tank ahead of the new bleaching plant. The Bellmer bleachers in No. 1 soda mill are no longer being used.

According to George Pringle, assistant chief engineer of The Mead Corporation, the results being obtained are very satisfactory. Changes were made to maintain strength of the fibers in the pulp, increase brightness in color, and to make possible the use of various species of wood that could not be handled by the old process.

Mr. Pringle said that soda is delivered to No. 2 and 3 beater rooms with a higher consistency than ever before. This higher consistency makes possible an increase in storage capacity and is desirable for stock processing.

With the advent of the new bleaching plant it was necessary to install a water softening plant. Designed for the ultimate capacity of No. 2 soda mill, the softening plant is now operating at the rate of 3,500,000 gallons per day. All of this water is being used in the new bleach plant and is additional water from the wells in excess of that pumped out before the plant went into operation. With this additional requirement, the Mead mill is pumping 21,000,000 gallons of water each day.

A new addition to The Mead Corp.'s Kingsport, Tenn., mill will cost approximately $150,000 including equipment. This mill produces book and magazine papers. The addition will be of one-story construction.

An 11% Wage Hike Granted B. C. Employes

A new wage agreement granting an 11% wage increase to 5,000 employes of pulp and paper mills of British Columbia was signed May 15 in Vancouver, B. C.

The contract provides for a minimum increase of 12 cents an hour and a maximum of 16 cents, plus three additional holidays with pay.

AFL union employes will continue a 44-hour week at a basic rate of $1.06 an hour. New rates for papermakers and higher classifications will be over $2.25.

The settlement marks 12 years of contract employment without a strike.

New Installations At Nekoosa Kraft Mill

A Cottrell electrical precipitator and a new Combustion engineering 125,000 lbs. per hr. boiler have been installed in the Nekoosa, Wis., kraft pulp mill of the Nekoosa-Edwards Paper Co.

Tests conducted by the equipment builders show that slightly over 95% of the chemical in the gases leaving the recovery furnace and going to the boiler stack was reclaimed by the precipitator. The over-all height of the precipitator is 55 feet. The dry type Cottrell precipitator was installed to remove sodium salts from the gas stream from the Combustion Engineering recovery furnace. The high voltage current employed in the precipitator ionizes the chemicals in the gas and causes them to be deposited on collecting electrodes.

Installation of the new C.E. boiler put the entire Nekoosa mill steam production on modern, high pressure, high efficiency operation. Designed to operate at 450 lbs. pressure and 700° F., the new boiler is equipped with two size 453 Raymond Bowl pulverizers, each of which will handle 75% of full capacity.

Orr Felt Puts on Meeting For Miami Valley Supts.

Orr Felt & Blanket Co. put on the show when the Miami Valley Superintendents division moved away from the valley for a special day-long convention in Piqua, Ohio.

They were greeted by Mrs. Norman B. Scott, wife of the sales manager of Orr Felt, at the hotel prior to a buffet lunch. Then came conducted tours of the felt plant and golf. A dinner was held at the Orr Felt & Blanket Co. cafeteria in the evening.

About 160 attended.

L. A. Koester is general manager and John Koester is secretary of the host company. Frank Eilers, sales representative for Orr who is stationed in Kalamazoo, Mich., assisted in handling arrangements.

THE MIAMI VALLEY DIVISION of the Pulp and Paper Mill Supts. Association held a meeting at Piqua, Ohio, on Apr. 22 and they had golf and a guided tour through the Orr Felt & Blanket Co. on the program. There was a social hour with the felt company as host before a dinner in the company's cafeteria. Here is the "speakers' table" (clif to right): WILLIAM REIGERS of Beckett Paper Co.; HAROLD C. LEIGHTON, of Beckett Paper Co.; the Rev. JOHN WILLIAMSON of St. James Episcopal Church, Piqua; ARTHUR F. GARDNER, Champion Paper & Fibre Co., Hamilton O.; HAROLD H. BURROWS, Manhattan Rubber Co.; RAYMOND F. BENNETT, Ecusta Paper Corp., Brevard, N. C., who is national President of the Supts.; ARTHUR H. WILSON, Champion Paper & Fibre Co., and NORMAN B. SCOTT, Sales Mgr., Orr Felt & Blanket Co., Piqua, O.

ONE OF SOUTH'S GREAT MILLS
IMPROVES PRODUCTION

An interesting and significant unit of this industry in the South is the West Virginia Pulp & Paper Co. addition now completed at its Charleston, S. C. mill involving an expenditure of approximately $6,000,000.

This work was started in 1946, a decade after the original mill construction was inaugurated. Production of kraft paper from the new 246-inch Beloit Fourdrinier machine was started in May, 1947. The Charleston machine is Beloit's first large post-war machine put into production. The new features of the machine are described later in this article.

Back of the new machine are all the production units needed to keep this in 24-hour-a-day operation. A new digester furnished by the A. O. Smith Co. of Milwaukee, Wis., was added to the existing seven digesters.

The main equipment for the new screen room was furnished by Improved Paper Machinery Co., Nashua, N. H., and consists of three knotters, eight flat screens, three thickeners and two consistency regulators. The building was designed to permit expansion for increased production. The entire screen room is served by a bridge crane.

The refiner room and associated Kalamazoo Tank & Silo Co. tile stock chests present some interesting features originating within the mill. On the ground level are the three tanks; one each for raw stock chest, refiner chest and machine chest. Each is equipped with two Impco agitators except the machine chest which is relatively small and is equipped with one agitator. Gould stock pumps are used throughout the installation and these are driven by Reliance Electric & Engineering Co. totally enclosed fan-cooled motors.

INCREASED CAPACITIES

In official listings for the Charleston mill its production capacity before the installation of the new Beloit "all-purpose" machine was:

Containerboard	200 tons daily
Kraft pulp	500 tons daily

The mill then had only one Fourdrinier. With the addition of the new Fourdrinier, and other improvements, listing has been revised as follows:

Kraft papers	135 tons daily
Containerboard	450 tons daily
Kraft pulp	635 tons daily

On the upper level are six Sutherland 42-inch refiners driven by 300 HP Westinghouse synchronous motors. The refiners are installed on a reinforced concrete platform raised above the refiner room floor. Beneath the platfom is a stainless steel flume into which the refiners discharge. The arrangement is such that the effectiveness of any refiner may be observed and checked for performance. The flume discharges the stock to the machine chest through a regulating gate and overflow. The refiner installation is served by two DeZurik consistency regulators.

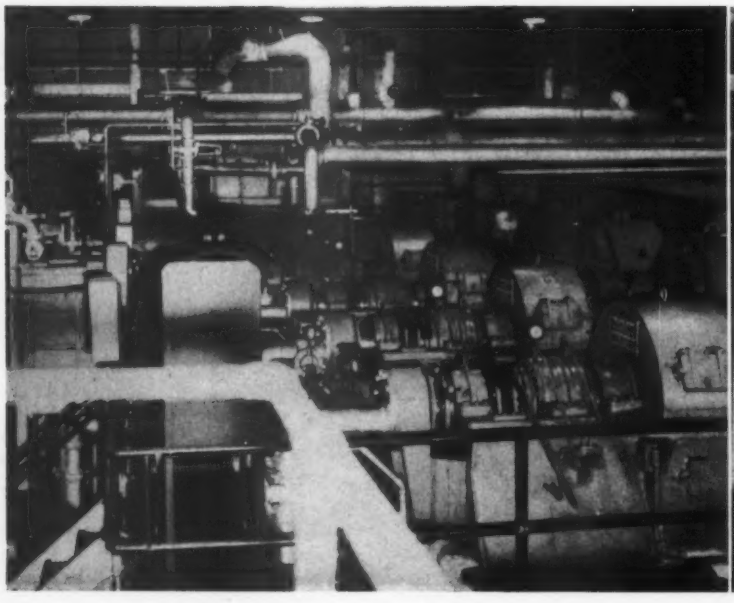
The refiner room is designed to accommodate eight Sutherland refiners but at the present time the space for the additional two refiners is occupied by two Noble & Wood Mammoth Sr. jordans. These do not discharge into the refiner flume. The stock is pumped to the jordans and the piping and valve arrangement is designed to permit maximum flexibility in accordance with refining requirements.

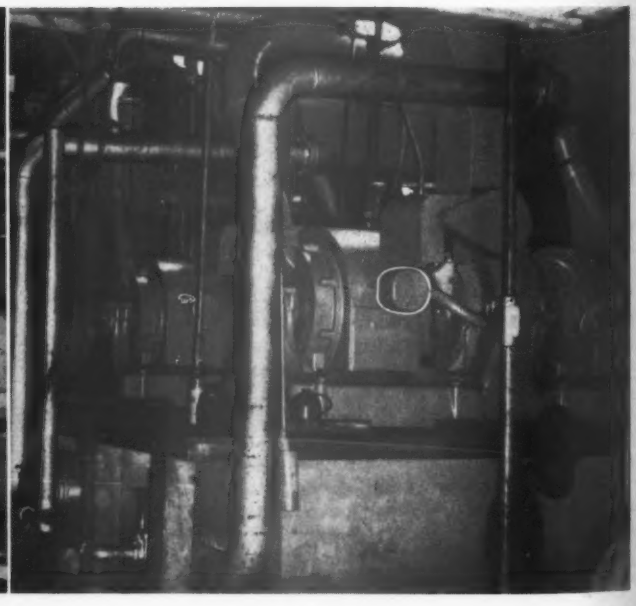
The stock is delivered to a DeZurik regulator located in the machine room and then drops into the fan pump suction for final delivery to the paper machine. The fan pump was furnished by Warren Steam Pump Co. and is probably one of the largest units ever furnished for this service. It is driven by two General Electric Triclad motors though double extended shafts. These motors drive the pump at different speeds giving a rated capacity of 18,000 gpm and 25,000 gpm and a maximum capacity of 30,000 gpm. The drives are equipped with Fast Cutout type couplings for quick change to either motor, and are made at the Bartlett-Hayward division in Baltimore of Koppers Co. The wire pit is of suspended construction, allowing the location of wet end auxiliaries in the most desirable position. This is a departure from conventional wire pit installations and results in considerable space savings.

The wet end auxiliaries are controlled from a panel alongside the head box. This panel was furnished by Republic Flow Meters Co., which also furnished the strip chart recorders for recording wet end per-

AT LEFT IS SHOWN a battery of six 42-inch Sutherland Refiners, designed by Sutherland Refiner Co., Trenton, N. J., and manufactured at Valley Iron Works, Appleton, Wis., which are important installations at the Charleston, S. C., mill of West Virginia Pulp & Paper Co. In the picture, to left side, are seen DeZurik Shower Co. (Sartell, Minn.) Consistency Regulators, serving the refiners which are next toward the right, mounted on a raised platform. Further to the right are 300-hp. Westinghouse motors driving the Sutherlands. The refiners discharge into a stainless steel flume.

IN PICTURE AT RIGHT is one of Bauer Brothers Co. Re-Pulpers, one of recent installations at the Charleston mill.





formance. These include stock temperature, head behind slice, press roll loadings, vacuum on various rolls (primary and main couch; first and second suction rolls on dual press) and flat box vacuums. The pushbutton stations for operation of various wet end motors are also located on this panel. These are equipped with running lights which indicate whether the various drives are in operation.

The control panels for the Fourdrinier, press, breaker stack, size press and reel are of bench board type and were furnished by Foxboro Instrument Co.

Modernized Head Box and Slice

The Beloit slice is operated by an Ingersoll-Rand air motor mounted on top of the head box, rather than old type hand lift. The lip adjustments are more accessible than in earlier models. The head box is of steel construction with a stainless steel lining. Motor driven rectifier rolls in the head box are rubber covered.

A stream flow or teardrop valve controlling flow of stock to distributor is so designed that the flow of stock through the valve is smooth and therefore the danger of forming lumps is minimized.

The Fourdrinier wire is 246 inches wide and its length is 121 feet. The Fourdrinier is equipped with Micarta-covered table rolls and stainless steel deflectors. There are eight suction boxes of liberal size and very ample discharge connections. There is room provided for two additional suction boxes. Other features include a Beloit multiple high speed shake and a liberal use of stainless steel wherever essential in order to minimize maintenance and dirt.

The couch pit agitator is a very substantial multi-paddle design and was furnished by Improved Paper Machinery Co. The agitator is motor driven through a Falk reduction gear.

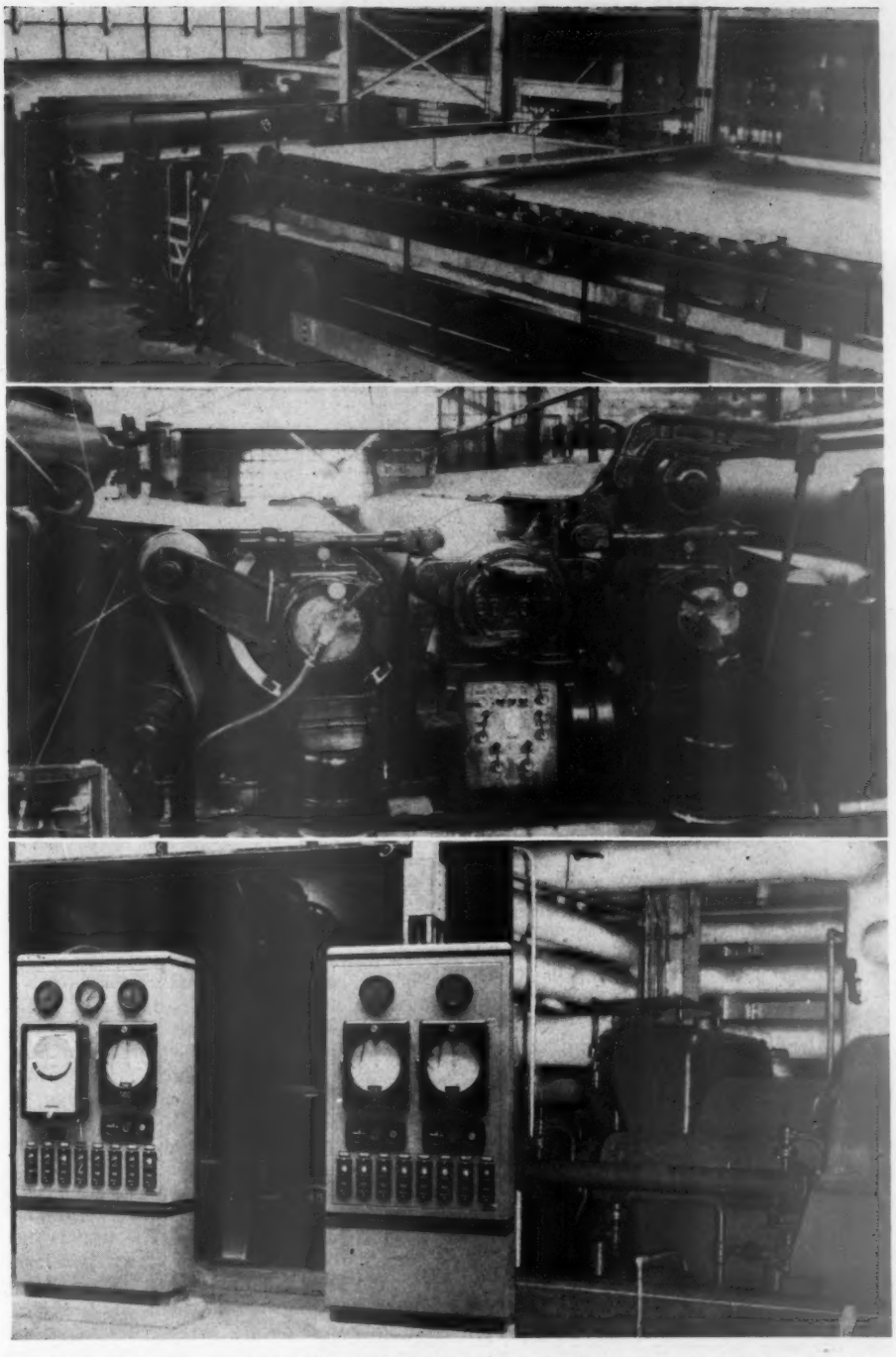
The primary and main couch rolls are both 42 inches in diameter. The suction primary couch rolls duplicates in most respects the main suction couch roll but it is installed in the position quite commonly occupied by the wire guide roll. Thus the run of the wire from the Fourdrinier flat boxes passes straight to the primary couch and then to the main couch roll at the conventional location. Provision has been made to run a lump breaker roll at either main couch or primary couch position.

Double Area Suction

There is an excellent arrangement of couch helper drives. By incorporating a double area suction on the third roll of dual press, water can be held in the roll and the felt and sheet are brought off in a straight line, thus allowing higher speeds with less danger of breakage. The press is air-loaded by means of diaphragms. This gives the operator full control of the nip pressure at the front and back of the machine, and this nip pressure is indicated at all times by gauge readings.

Felt guides are air-operated. An air guide is provided for the suction presses. Since the Witham head on the guide roll operates against a light spring, the guide is very delicate and practically no felt tension is required on the Witham head.

The guide automatically seeks to position itself since when the Witham head calls for more air pressure in the guides the piston goes up, and as it goes up, it automatically releases the tension on the spring with the same position of the Witham head. One great advantage over the mechanical guide is that it will operate just as efficiently at any machine speed and eliminates mechanical troubles.



TOP VIEW SHOWS the new Beloit 246-inch Fourdrinier machine installed at West Virginia Pulp & Paper Co. at Charleston, S. C., and described in this article. This shows Fourdrinier section looking toward dryers.

Next below is shown Beloit's patented dual press, on the new machine. Here is shown the third roll with double suction area. Air loading here is elastic. The sheet and felt are shown leaving in a straight line. Below, left, Foxboro Instrument Co. control panels for the dryers. The panel at left carries a Foxboro Verigraph and dryer temperature for the third section; the one at right carries temperatures for the first and second dryer sections.

Below, right, shows how Beloit mechanical drive for machine is driven by a 1600 hp. Westinghouse turbine and gear designed for 10 to 1 speed range.

Vacuum for the various sections of the Fourdrinier and presses is obtained by eight L-10 Nash vacuum pumps, driven by four (4) 300 HP General Electric synchronous motors of splash proof construction. Also, part of the vacuum pump installation is one K-8 Nash pump and one L-9 Nash pump, each driven by a 75 HP General Electric induction motor through Texrope drive. These pumps are arranged so they can be segregated in ac-

cordance with machine requirements.

All white water, service water and shower water pumps were furnished by Warren Steam Pump Co. The squirt pumps, couch pit and broke beater pumps were furnished by Goulds Pumps Inc.

Three Dryer Sections

The dryer sections of the machine is divided into three sections with a total of 48-60-inch paper dryers and 10 felt dryers, with breaker and marking press between the first two sections and size press between the last two sections.

The steam control and dryer drainage system was furnished by Midwest-Fulton Machine Co. All steam control valves, controllers, Verigraph moisture recorder and instrument panels were supplied by Foxboro Instrument Co. All drying control is centralized on these panels located at the dry end of the paper machine.

The machine has two sources of steam, one at 65 lbs. and the other at 35 lbs. gauge. Through automatic control valves connected with the operating panel, selection of proper pressure is effectively executed. The steam control for the system is most thorough and alone would furnish material for an interesting article. It was designed by G. H. Young, Midwest-Fulton Machine Co. in cooperation with mill engineers.

The entire ventilation system for the new machine was furnished by J. O. Ross Engineering Co. and consists of three separate hoods over the dryer sections, 6-72-inch Sturtevant Axiflo exhaust fans, 6-72-inch Sturtevant Axiflo air supply fans, with extended surface heaters and two 72-inch Propellair exhaust fans for ventilation over the Fourdrinier. A felt air supply system delivers heated air to the bottom dryer felts.

A calender cooling system utilizes two fans and delivers air to the bottom calender rolls in accordance with operating requirements.

The two Beloit 7-roll calender stacks are equipped with 34-inch diameter bottom rolls mounted on SKF Industries, Inc., anti-friction bearings. A Beloit reel capable of winding a 72-inch diameter roll is provided.

The front of the reel has been improved by using a panel control as compared with old arrangements. With this panel the operator can control the air clutch, slack take-up on the reel drive, belt shifter, pressures on the air cylinders to control tightness on the roll, and movement of the transfer arms.

Paper Machine Drive

The paper machine is driven through a Beloit mechanical drive by a 1600 HP Westinghouse turbine and gear. The turbine is rated at 140 lbs. throttle steam pressure and 35 lbs. exhaust pressure. The turbine is designed for a 10 to 1 speed range, permitting paper machine speeds of from 180 to 1800 fpm.

On the back of the new high-speed machine, the helical gears are of small diameter and completely enclosed to assure good lubrication and quiet running. The idler gears between the two main gears are mounted on roller bearings and are also completely enclosed in the housings. The combination of framing and gear housing affords a very rigid framework in the back where it is needed.

Complete indicating and recording instruments are panel-mounted alongside the turbine, with speed control and emergency trips on the operator's panel at the wet end of the paper machine.

The mechanical drive is supplemented by a Westinghouse DC helper drive at the Fourdrinier, dual press and size press top roll. The main motor generator set is driven by a 650 HP synchronous motor.

All electric controls used in the plant expansion have been Westinghouse cubicle and load center type control. 2400/480-volt transformers are General Electric pyranol filled. The electrical equipment for the screen room, evaporator room, bark burning boiler, refiner room and paper mill is housed in separate rooms. The electrical equipment for the refiner room and paper mill is located in a room 142 feet long. All AC and DC motor control, motor generator sets, rototrols and transformers are located in this room.

This room is separately ventilated by two 42-inch Sturtevant Axiflo fans which keep the room under slight pressure. The incoming air is passed through a Westinghouse precipitron which removes 90% of the foreign material in the air. The air is discharged to the back side of the Fourdrinier. The room has been painted following color dynamics recommendations.

Power for the new paper machine and for the equipment serving it necessitated the installation of a 7500 KW Westinghouse double-bleeder condensing turbogenerator. The turbine is designed for 550 lbs. throttle steam pressure, 700° F. total temperature and 300,000 lbs. per hour throttle steam flow. Process steam is bled at 150 lbs. gauge and 65 lbs. gauge.

Additional steam for the new installation is supplemented by a Babcock & Wilcox bark-burning boiler, which can burn slack coal when the need arises. This unit is of new design and is equipped with a roto-grate stoker. The unit is designed for 85,000 lbs. of steam per hour at 560 lbs. gage pressure, 700° F. total temperature. The unit has carried 25% in excess of design capacity for extended periods when burning bark and loads up to 130,000 lbs. per hour when burning coal. Under normal operation, the bark is cut up in a bark crusher and passed through a screen. Its moisture content varies from 25 to 70% and its ash content also varies considerably.

The machine room is serviced by two 20-ton bridge cranes. A new bridge crane was furnished by the Whiting Co. and has an air-conditioned cab. A large hatch is provided directly ahead of the No. 2 machine which makes it possible to run a truck or trailer under the 20-ton bridge crane. The machine basement is arranged to permit truck passage the entire length of the machines. This materially helps in getting felts, rolls and miscellaneous equipment to the machine.

A 12-ton Semi-Gantry crane is used to transfer the rolls from the reel to the Beloit winder backstand. A 5-ton bridge crane serves the heavy auxiliary machinery such as Nash pumps, air compressor and Bowser system. Separate monorails and hoists are provided to handle heavy parts on the steam turbine and gear, Warren fan pump and main motor generator set. A separate 3-ton bridge crane is furnished to serve the drive equipment on the back side of the paper machine and the Beloit winder drive.

A 230" Beloit winder, designed for 4000 FPM top speed serves the new paper machine. This winder is provided with air operated backstand brake. Other features include automatic shaft pulling and replacement system. A motor driven roll ejector pushes the rolls on to a shaft puller, where an air operated shaft holder and motor driven shaft puller complete this part of the operation. The roll is discharged to a roll table. Four air cylinders tilt this table and deliver the finished rolls to finishing floor level.

The winder is driven by 300 HP Westinghouse force ventilated DC motor, with Allis Chalmers Vari-pitch Texrope drive for speed adjustment between two winding drums.

A 230-inch Cameron Machine Co. winder will be relocated to the finishing room. There is also a 84-inch Langston winder relocated to the finishing room. A Shartle broke beater will send trimmings back to the mill as slush pulp. A 12000-lb. rotary lift hydraulic elevator will connect between the finishing room and the machine operating floor. There is also a 4-ton bridge crane for use in special roll handling in and out of storage.

The comfort of the operating men is provided for by a well appointed locker room, wash room and shower room. Similar accommodations are also provided for members of the superintendents' staff, including additional office facilities.

The machine room framing is of steel which rests upon piling and reinforced concrete piers. The building is of glazed tile with glass brick for abundant light admittance to the back side of the paper machine.

Mill Built in 1936

Construction of the Charleston mill, most recently erected of the six West Virginia mills, was started July 1, 1936, and it produced pulp 46 weeks later. It produces Fourdrinier kraft liner board from a 242-inch Pusey & Jones board machine, at the time installed the longest machine in the world.

The mill site is about 10 miles north of Charleston and is served by three railroads.

More than 20 years ago, a decade before the Charleston mill was built, the company contemplated the ultimate location of a southern mill and started to acquire ample forest land. The mill is now backed by approximately 400,000 acres of excellent forest.

T. A. "Doc" Cook is resident manager at Charleston; J. D. Cowan is assistant manager in charge of operations, and Frank L. Thompson is assistant manager in charge of administration.

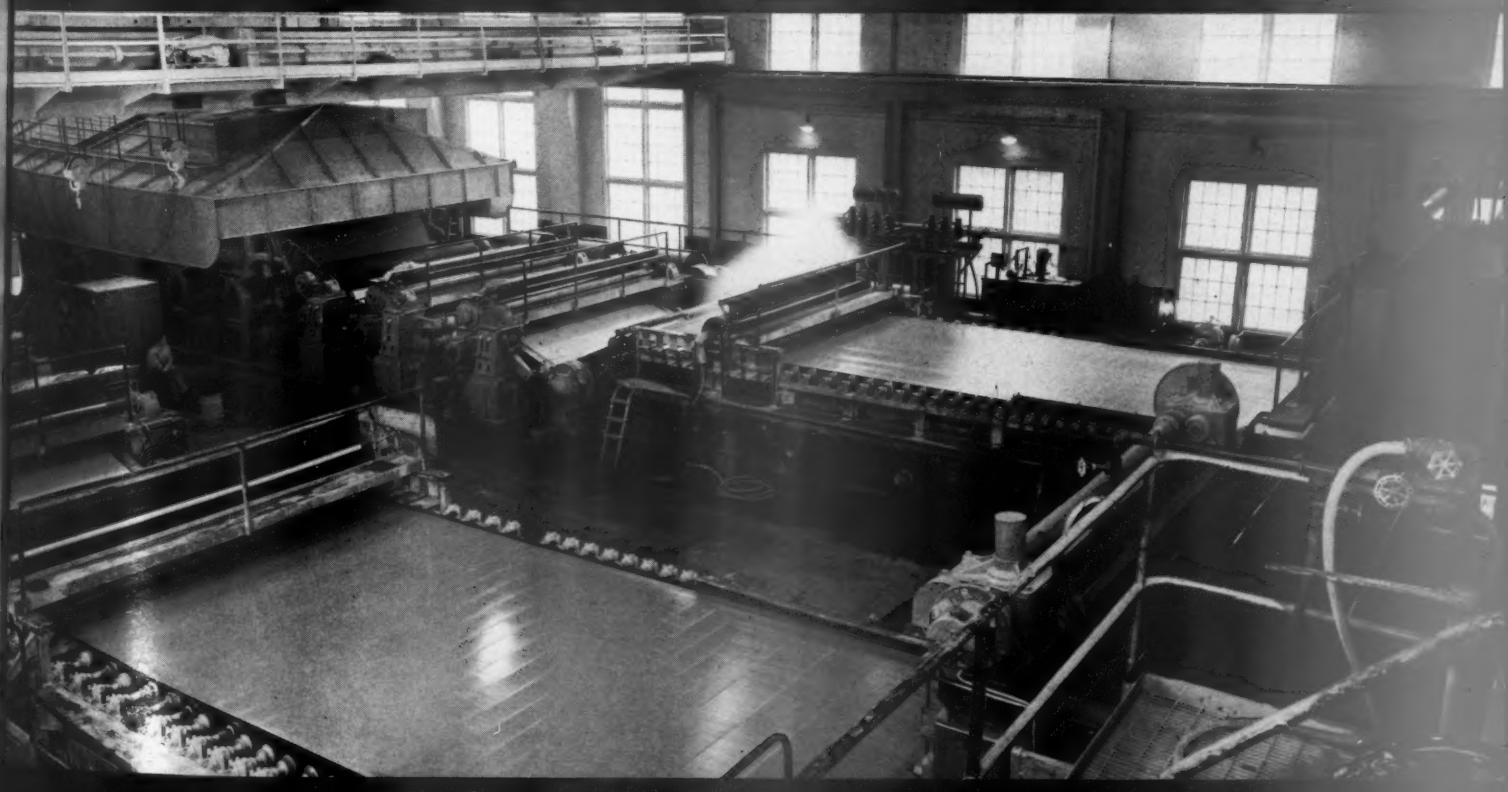
EAST COAST

Kraft papers of many grades are manufactured in the West Virginia Pulp & Paper mill at Charleston, West Virginia. Shown above is the Beloit 246" kraft paper machine helping to maintain the West Virginia production schedule. This fine mill has an enviable reputation for high quality and many innovations in paper making.

BELOIT IRON WORKS · PAPER MACHINERY · BELOIT, WIS., U.S.A.

Coated book papers of distinguished quality come from the Crown-Zellerbach mill at West Lynn, Oregon. Beloit installations at the mill are seen below—a new 165" machine and an almost entirely rebuilt 155" machine. Many up-to-the-minute developments in paper craftsmanship are associated with this well-known mill.

WEST COAST



Personals

NORTHEAST

THOMAS K. LUKE, chairman of West Virginia Pulp and Paper Company, 230 Park Ave., New York, died at New York Hospital on May 12th. He was 77 and had been residing at the Hotel Barclay since 1947.

Thomas Luke was one of the six sons who joined their father in developing the big pulp and paper enterprise from the original mill in Luke, Maryland, associating with the company four years after its founding. A graduate of the University of Pennsylvania, Mr. Luke was active principally in the manufacturing division of the company. In 1934 he became president, and retired in 1945 to become chairman of the board. He is survived by a son, Donald K. Luke; four daughters, Mrs. H. Freeman Matthews, Mrs. Henry T. Burns, Mrs. Parker Wilson, and Mrs. John C. Graham; and a brother, Adam K. Luke.

Mr. Luke directed the activities of the company until 1945 when he reached retirement age and turned over the reins to his nephew, David L. Luke, Jr. When he retired from the active management, Mr. Luke waived his rights to a pension and agreed to serve as chairman without salary. Mr. Luke took an active interest in the company's affairs, going to his office regularly until his illness forced him to abandon his business routine.

D. S. LESLIE, general manager and vice president of Hammermill Paper Co., Erie, Pa., has been appointed chairman of the finance committee of AP&PA, and also to succeed Norman W. Wilson on the public affairs committee of the association. Mr. Wilson is president of Hammermill.

ROBERT J. SINCLAIR, 5141 Hazel Ave., Philadelphia, will represent Pacific Car and Foundry Co., Renton, Wash., in the New England States. Mr. Sinclair has been an engineer at Pacific Car, and assistant engineer at Puget Sound Bridge and Dredge Co., sales engineer for Alexander Gow, Inc., of Seattle, and served in U. S. Army Engineer Corps.

SIDNEY FERGUSON, former president of Mead Corporation, has been elected chairman of the board, succeeding George H. Mead who has been elected to the newly created office of honorary chairman. The new president of Mead is *C. R. VAN DE CARR, JR.,* former executive vice president. *J. O. MASON* was promoted to executive vice president, and *H. E. WHITAKER* is the new operating vice president. Mr. Ferguson is president of American Forest Products Industries, elected this year.

A. V. HOWLAND, vice president and assistant treasurer, Tileston & Hollingsworth, Boston, Mass., returned recently from a vacation in Arizona.

Charles Grondona Joins Peter J. Schweitzer, Inc.

Charles Grondona, formerly one of the assistant resident managers at the Crown Zellerbach Corp. mill at Camas, Wash., has resigned that position to accept an offer from Peter J. Schweitzer, Inc., manufacturers of cigaret, electrical, carbonizing and airplane bond papers.

Mr. Grondona will be based at Elizabeth, N. J., where he will work under William P. Schweitzer, vice president, in manufacturing operations. This mill has three Fourdriniers making 11 tons daily of specialties.

FRED E. BAHRENBURG has been named to lead a new project at Hammermill Paper Co., Erie, Pa., to be known as "The Technical Paper Section." As announced by Donald S. Leslie, general manager and vice president, the section will be organized to create and develop a program for the creation of technical papers within the mill organization. Mr. Bahrenburg's direct contact officer will be John D. Zink, assistant vice president, who represents the general management in the project.

GEORGE OLMSTED, JR., president of the S. D. Warren Co., Boston, Mass., has been elected a director of Suffolk Savings Bank for Seamen and Others.

COURTLAND B. GRIFFIN, president of Carew Mfg. Co. of South Hadley Falls, Mass., died April 13th, and has been succeeded by J. Norman McDowell. This company operates two machines, making bond and currency paper.

Personals

MIDDLE WEST

DONALD D. DAVIS was re-elected president of Minnesota & Ontario Paper Co. on April 26 and *R. H. M. ROBINSON* was re-elected chairman. There are two vice presidents, *R. W. ANDREWS* for production and *C. T. McMURRAY* for sales, and *R. D. MAIN* was re-elected secretary-treasurer.

DONALD G. KETTNER, native of Rhinelander, Wis., and former assistant railroad freight agent at Marquette, Mich., has become assistant to Henry Fredlund, traffic manager of Nekoosa-Edwards Paper Co. Mr. Kettner entered the United States Coast Guard in 1942 and served in Europe.

F. J. SENSENBRENNER of Neenah, Wis., has been re-appointed to the board of regents of the University of Wisconsin by Governor Rennebohm of that state. Mr. Sensenbrenner was for years active in top management of Kimberly-Clark Corp., finally as board chairman.

MARK WILDER BRAY, who was in charge of alkaline pulping investigations in the Pulp and Paper Division of the U. S. Forest Products Laboratory, Madison, Wis., died of coronary thrombosis April 24. He was 58. Mr. Bray was a graduate of Lawrence College, Appleton, Wis., and his master's degree was obtained at the University of Minnesota and further studies were at Cornell. He served at Picatinny Arsenal, Dover, N. J., during World War I, and in 1920 entered pulp and paper research at Madison. Many of the methods of pulp analysis which he developed at that time have since become standard. He developed a method for producing easily-bleached sulfate pulp and was a pioneer in the development of the multi-stage chlorine bleaching of southern pine pulp. At the time of his death, he was investigating effects of different types of decay in wood on pulp.

C. M. (MIKE) CONNOR, formerly with the Glassine division of Westfield River Paper Company, is now associated with the Research and Development Division at The Ohio Boxboard Company, Rittman, Ohio.

FRED HOLLENBECK, plant engineer; *GEORGE ZITELMAN,* master mechanic, and *BERNARD NOBBE,* superintendent, and other executives in the engineering and manufacturing departments at the Badger-Globe mill in Neenah, Wis., of Kimberly-Clark Corp., were credited with helping to establish long-term safety records in those departments. The engineering department, with 90 employes, went two years, and the manufacturing department, with 150, went 500 days without a lost-time accident.

R. B. SAWTELL, sales manager of creped wadding for Kimberly-Clark Corp., Neenah, Wis., was recently elected president of the Fox River Valley Sales Executives Club. *A. W. STOMPE,* general sales manager of Marathon Corp., Menasha, Wis., was elected vice president.

FRED GOETZMAN, newly elected president of Thilmany Pulp & Paper Co.'s Quarter Century Club, has had 50 years' service in that mill, starting at the age of 17. Only employe with longer service is Bernard Radermacher, who has 53 years this June. William Voie, secretary of the club, has a 36-year record.

P. S. CADE of Harding-Jones Paper Co. has been elected chairman of the Ohio section of TAPPI. Arthur Thurn of Champion was elected vice chairman; H. A. Smith of Mead Corp. was elected recording secretary; S. R. Holmes of Gardner-Richardson was elected corresponding secretary, and R. D. McCarron of Stein-Hall was elected treasurer.

DAN T. QUIRK, vice president of Peninsula Paper Co., in Ipsilanti, Mich., has proved a hard working and popular mayor of that little town. His father, Dan L. Quirk, Jr., is president of the company.

NEW WEST LINN MILL

CREATES TWO NEW INDUSTRIES

As a result of extensive additions and improvements upgrading the paper products of the big West Linn, Ore., mill of Crown Zellerbach Corp., the Pacific Coast now has two new and important industries—a machine-coated paper industry in West Linn itself (the first west of Wisconsin) and a modern and elaborate printing plant of Pacific Press, Inc., in Los Angeles.

One of the historic mills of the Far West, whose history goes back 59 years, the West Linn mill before World War II was producing newsprint, groundwood specialties and sulfite wrapping papers on its 10 machines, but today it has an even greater variety of products, with one new machine and one rebuilt machine producing machine-coated paper under a process licensed by Consolidated Water Power & Paper Co., of Wisconsin Rapids, Wis.

According to announcements already made, the output of these machines, in excess of 60,000 tons per year, will go to Time, Inc., and to Curtis Publishing Co., and it is already resulting in delivery of Life and Time to most of the Pacific Coast subscribers to those magazines on the same day as delivery is made in New York City — instead of three days or four days later, as has been the rule. Life's readers in California and Time's readers all up and down the Coast benefit as a result of the new methods instantly teletyping the whole magazines to the new Los Angeles plant of Pacific Press, Inc., partly owned by Time-Life (**PULP & PAPER**, p. 84, Oct. '47; p. 46, June '47), a feature of which is a battery of teletypes connected directly with Time's offices in New York.

PETER T. SINCLAIR, Resident Manager of West Linn, Ore., Division of Crown Zellerbach Corp., who studied all phases of paper machine coating for several years to prepare himself for his present position and for overseeing the installations at West Linn.

The process used at West Linn for coating is installed between two dryer sections of the machine and was developed by Peter J. Massey, winner of TAPPI's Gold Medal of last year, in pioneering work done over a decade ago at Wisconsin Rapids with the backing and support of George Wilson Mead, founder and president of Consolidated Water Power & Paper Co. The work was concurrent with the appearance of Life magazine in 1936 and the first use of rotary heat set high speed presses. Mr. Mead envisaged this as a challenge to papermakers for greater speed, high production and quick drying of coated paper. In turn, the Crown Zellerbach officials, including especially the late Albert Bankus, vice president of manufacturing, saw the need for similar production on the expanding Pacific Coast over five years ago. About that same time they assigned Peter T. Sinclair, then mill manager at Carthage, N. Y., to make thorough-going study of this important field of production.

In **PULP & PAPER**, Nov. 1944 issue, Mr. Massey described the process this way:

"This equipment is based upon the premise of preparing a preworked film and applying said film to the continuous web of paper in its course of travel on the paper machine. The basic patents involving this principle cover a multiple number of rolls."

Key personnel at the West Linn plant who direct the manufacture of coated paper include the following Peter T. Sinclair, resident manager; R. A. Dupuis, assistant manager, recently manager of the Crown mill at Port Angeles and C. A. Enghouse, assistant to the manager. The operating personnel includes J. A. Harris, paper machine superintendent, assisted by A. T. Gardner, recently superintendent of Provincial Paper Co. at Port Arthur, Ont., making coated paper, and R. W. Riley, who came to West Linn after long experience with Consolidated and also with the Mead Corp.

Sulphite pulp manufacture, including bleaching, is headed by J. A. Haugerod,

A GENERAL VIEW OF WEST LINN, Ore., mill showing new installations on west bank of Willamette River. At extreme left is new substation and filter plant on hill, above the wood plant and groundwood mill. The sulfite mill with its high stack is next. Under the electric sign which reads "Crown Willamette Paper Co., division of Crown Zellerbach Corp.", is building housing Nos. 1, 2, 3, and 4 machines. Next is the bleach plant and behind it No. 9 machine room. New long building to right of bleach plant houses the supercalenders. Next is old boiler house; then No. 5 and 6 machine room and—at extreme right—clay storage and coating preparation.

WEST LINN mill executives who have had active roles in effecting new operations at that plant (left to right): Raymond Dupuis, Assistant Resident Mgr.; Clarence Enghouse, Assistant to the Res. Mgr.; Ed H. Nunn, Technical Supervisor; Jesse A. Harris, Paper Mill Supt.; A. T. Gardner and R. W. Riley, coating paper specialists and assistants to Mr. Harris, and J. A. Haugerod, Pulp Mill Supt.

and groundwood pulp production by A. Palmer. Technical control is under direction of E. H. Nunn, technical supervisor.

Outstanding Features

There are many outstanding features of the developments and installations at West Linn. They are as follows:

1. First machine-coating process in west.
2. One-third saving in wood through use of clay.
3. Reduction of fiber loss to the river.
4. Modern personnel facilities.
5. Increase in employment by 140 workers.
6. Flood protection of motors; and other groundwood mill changes.
7. New power distribution facilities.
8. Automatic clay handling.
9. Training program for coated paper manufacturing.
10. New continuous bleach plant.
11. Technical research program.
12. Engineering organization.

Paper Machines

The new No. 6 machine and the rebuilt No. 5 machine have both been operating at approximately 1,000 feet per minute for a majority of the time since they went into operation; further increases in operating speed are expected in the near future. Number six now trims 149½ and No. 5 trims 139½ inches—the combined total production being about 220 tons of coated papers.

The West Linn program also includes improvements for several other machines with the result that the total mill output is being materially increased.

Designed and built by the Beloit Iron Works, Beolit, Wis., No. 6 machine required over 60 freight cars for its transportation to the mill. It contains many modern improvements which have made its operators the envy of the other papermakers in the West Linn mill.

The Fourdrinier is of the removable type with double-unit high-speed shake. Its framework is stainless steel covered and particular care was used in the design and construction of all wet end parts to guard against corrosion and to maintain the maximum degree of cleanliness.

The Bird screens discharge into a flow box of steel construction, monel lined, and the slice and headbox are also monel lined. Stock chests and pits are lined with glazed tile provided by Kalamazoo Tank and Tile Co. DeZurik consistency regulators are mounted in stainless steel boxes and all pipe lines are of stainless or Transite construction.

The machine is equipped with a Beloit mechanical drive and has hypoid gear units and air-operated multiple plate clutches. A General Electric turbine is positioned centrally in the basement line shaft and exhausts into dryer sections equipped with Midwest-Fulton steam system and Foxboro controls. The dryer gearing is of the fully enclosed, helical type with all gears and bearings continuously lubricated from a Bowser system. All parts of the paper machine are carried on roller bearings and it is designed mechanically for operating speeds up to at least 1,500 feet.

Controls for the entire machine were engineered as a separate part of the project and, as a result, have been grouped and mounted in a most efficient and attractive manner. The three main control stations are cabinet enclosures in the center of the main aisle and, incidentally, each carries the corresponding controls for both No. 5 and No. 6 machines. The machine tender's cabinet, located opposite the start of the dryer section, carries the controls, gauges, and tachometer for the General Electric machine drive turbine, the suction roll gauges, the Foxboro controls and gauges for the air-operated press loading equipment, and various other electrical controls for wet end auxiliaries. The coating section control cabinet is located opposite that section of the machine and carries the electrical and pneumatic controls for completely interlocking the sequence of operations and for starting, stopping and speed control of the various elements. The backtender's cabinet is located opposite the end of the dryer section and carries the various controls for the Midwest-Fulton steam system, ventilation controls and recording tachometer.

Other controls are located on panels mounted at convenient positions along the length of the machine. The Fourdrinier station panel is at the back of the machine adjacent to the slice. Each press frame carries a built-in panel with controls for air-operated drive clutches, felt stretcher and sheet draw. Desk type cabinets are located adjacent to the reel and the winder for the controls of those sections. The use of air operation for drive clutches, press loading, etc., contributed largely to the centralization of controls and flexibility of machine operation.

The machine-coated paper is supercalendered in a separate room and for this reason heavy-duty spools, duplicating those in service at the reel, are used in the Cameron winder. Large diameter, full width rolls are trimmed, rewound under constant tension control, and carried to the finishing room by a power operated mono-rail.

In rebuilding No. 5 machine, parts of the dryer sections of both old machines were used again. The paper dryers were completely refinished, this work being carried out at the mill in a grinder sent from Beloit and under supervision of an operator from the factory. New dryer bearings, arranged for continuous lubrication, were fitted and numerous other changes made so that the parts reused would be suitable for the new service. In other respects and except for its width, No. 5 is practically a duplicate of No. 6 machine.

Eight weeks were required to erect No. 6, during which time production was carried on continuously on No. 5 machine. After No. 6 went into production last July, No. 5 was shut down in October for seven weeks, in which period it was rebuilt and changed over to produce coated paper.

In erecting the machine and in routine maintenance in moving heavy machine parts, a new Ederer 15-ton bridge crane is used.

Supercalenders

As previously indicated, the full

Open House at West Linn

At an open house at the Crown Zellerbach Corp. paper mill, West Linn, Ore., 5,338 visitors were shown through the plant on conducted tours May 12, 13 and 14. In welcoming the visitors, P. T. Sinclair, resident manager, said, "With our new plant completely modernized during the past several years, with new coated paper being manufactured here for a half-dozen large magazines of national circulation, and with assurance of ample timber for all time, through wise forest management, we face the future with a sense of security for this mill, its workers and the community."

This sort of public program is not new to the CZ organization. However, it is the first such opening of plants to the public in such a large metropolitan area.

Special accommodations were made for tours by 4,500 school children. A full-color sound motion picture, "Paper—Pacemaker of Progress," was shown in the schools, along with talks and selected slides before the students visited the mill.

The open house program started on the afternoon of May 12 for nearly 900 local stockholders, personnel of the Portland CZ offices, logging personnel, and members of the Society of American Foresters. During the following two days students were taken through the plant between 9:00 a.m. and 4:00 p.m. Evenings were open to the public.

George LaHusen, safety supervisor, and Steve Coney, assistant personnel manager, were in charge of the open house program.

VIEWS AT WEST LINN:

Top left—Beloit No. 6 at left and Beloit No. 5 at right, two machines making machine coated paper. Cameron winder in foreground.

Top right—One of three Beloit supercalenders in finishing room. Note centralized control and open side construction to facilitate handling paper-filled calender rolls.

Middle left—New Beloit No. 6 machine.

Lower left—Drive side of No. 6 dryer section. Note description of drives in this article.

Lower right—Bird Machine Co. screens serve both No. 5 and No. 6 machines.

machine width rolls are supercalendered and for this operation three Beloit open-side stacks of 157-inch width were installed to handle the output of the two papermachines. Each stack mounts ten rolls, the chilled iron rolls furnished by Farrel and the paper-filled rolls by Appleton Machine Co. All rolls are carried in heavy-duty SKF roller bearings and continuous lubrication is provided by a Bowser system serving all three stacks.

A high pressure oil system is installed at each stack to operate the special hydraulic cylinders used to raise and lower the upper rolls and to supply the running pressures. Well over 100 tons total pressure can be carried on the bottom roll in regular operation. The stacks are driven through Falk reduction gears by General Electric variable speed D.C. drives capable of maintaining operating speeds of 1,600 feet per minute or better. The wind-up stands are powered by separate motors with special controls that provide automatic constant tension winding regardless of stack speed or size of roll.

Controls for the entire operation are centered in a conveniently placed desk and special study was given to interlocking the various elements so as to provide the maximum speed, ease and safety of operation. The rates of acceleration and deceleration of the main drive can be readily pre-set, allowing the operator to start and stop under push-button control; applied pressure and steam showers are automatically cut out as the stack stops; the sequence of raising and lowering rolls and applying pressure is fully safeguarded.

A 157-inch Cameron winder is installed in line with each supercalender and a single 87-inch rewinder with electric eye side register attachment has been provided.

J. H. MOAK, formerly Field Engineer of the Central Engineering Department, Crown Zellerbach Corp., for the recent new construction work carried out at Camas, Wash., and West Linn, Ore., plants, became plant engineer at West Linn on May 1.

The entire product from No. 6 machine includes two grades of paper — Pacific Gloss, a cream-white sheet which is being made to specifications of Life magazine, and Western Gloss, a blue-white sheet made to Time magazine specifications. A substantial share of No. 5 machine's production of coated paper is contracted to Curtis Publishing Co., publishers of Saturday Evening Post, Ladies' Home Journal and other magazines.

Because of the heavy weight of coated printing paper rolls, it is wound on cores fabricated from three-inch standard black iron pipe.

Here are some of the other features at West Linn:

1. Finishing Building

The finishing building, which houses the super-calendering section, is a three-story modern building of reinforced concrete construction. All windows are of structural glass blocks. It is provided with fluorescent lighting and the roof over the sheet finishing department is of sawtooth construction. Some idea of the size of this building can be obtained from the fact that it has an operating floor area in excess of 50,000 square feet and a super-calender section two stories in height.

In addition to finishing room facilities, this building provides space for a new and modern timekeeping office, complete with separate rooms for time cards and time clocks. It also includes a glassed-in modern bulletin board.

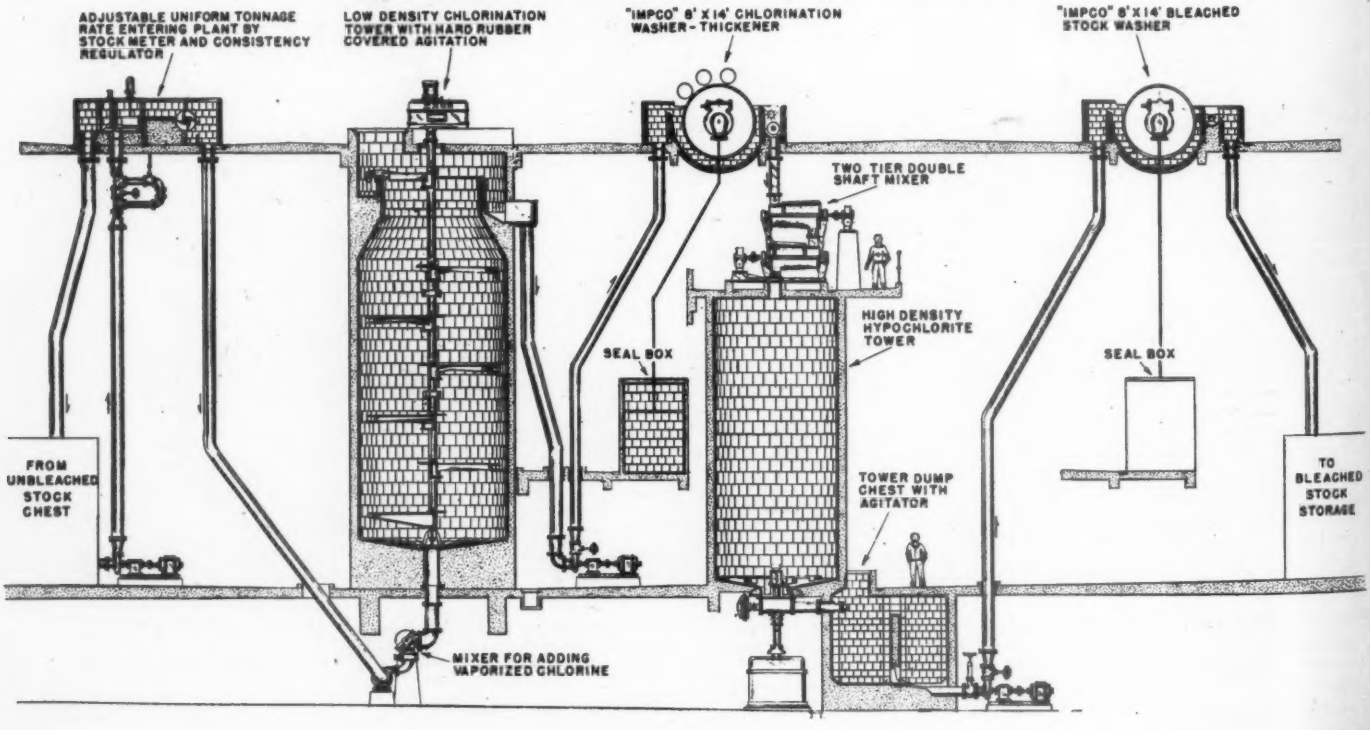
The super-calender room is equipped with a central vacuum cleaning system designed to keep dust and lint in the air to a minimum.

It is equipped with a five-ton Louden monorail system to facilitate handling of large paper rolls.

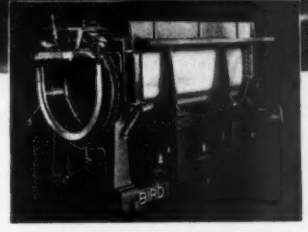
2. Less Wood Required

The new West Linn operations require about one-third or less of wood to make a ton of coated printing paper than were required to make a ton of uncoated paper. Pulp used in making the paper is a mixture of groundwood and bleached sulfite. The groundwood is made of white fir, hemlock and spruce. The bleached sulfite is made of hemlock. Balance of the

FLOWSHEET FOR THE NEW CONTINUOUS SULFITE BLEACH PLANT ENGINEERED BY IMPROVED PAPER MACHINERY CORP. AND NOW IN OPERATION AT CROWN ZELLERBACH CORP., WEST LINN, ORE.


ADJUSTABLE UNIFORM TONNAGE RATE ENTERING PLANT BY STOCK METER AND CONSISTENCY REGULATOR
LOW DENSITY CHLORINATION TOWER WITH HARD RUBBER COVERED AGITATION
"IMPCO" 8' X 14' CHLORINATION WASHER - THICKENER
"IMPCO" 8' X 14' BLEACHED STOCK WASHER
TWO TIER DOUBLE SHAFT MIXER
HIGH DENSITY HYPOCHLORITE TOWER
SEAL BOX
SEAL BOX
FROM UNBLEACHED STOCK CHEST
TOWER DUMP CHEST WITH AGITATOR
TO BLEACHED STOCK STORAGE
MIXER FOR ADDING VAPORIZED CHLORINE

BIRD SCREENS On the Job At WEST LINN

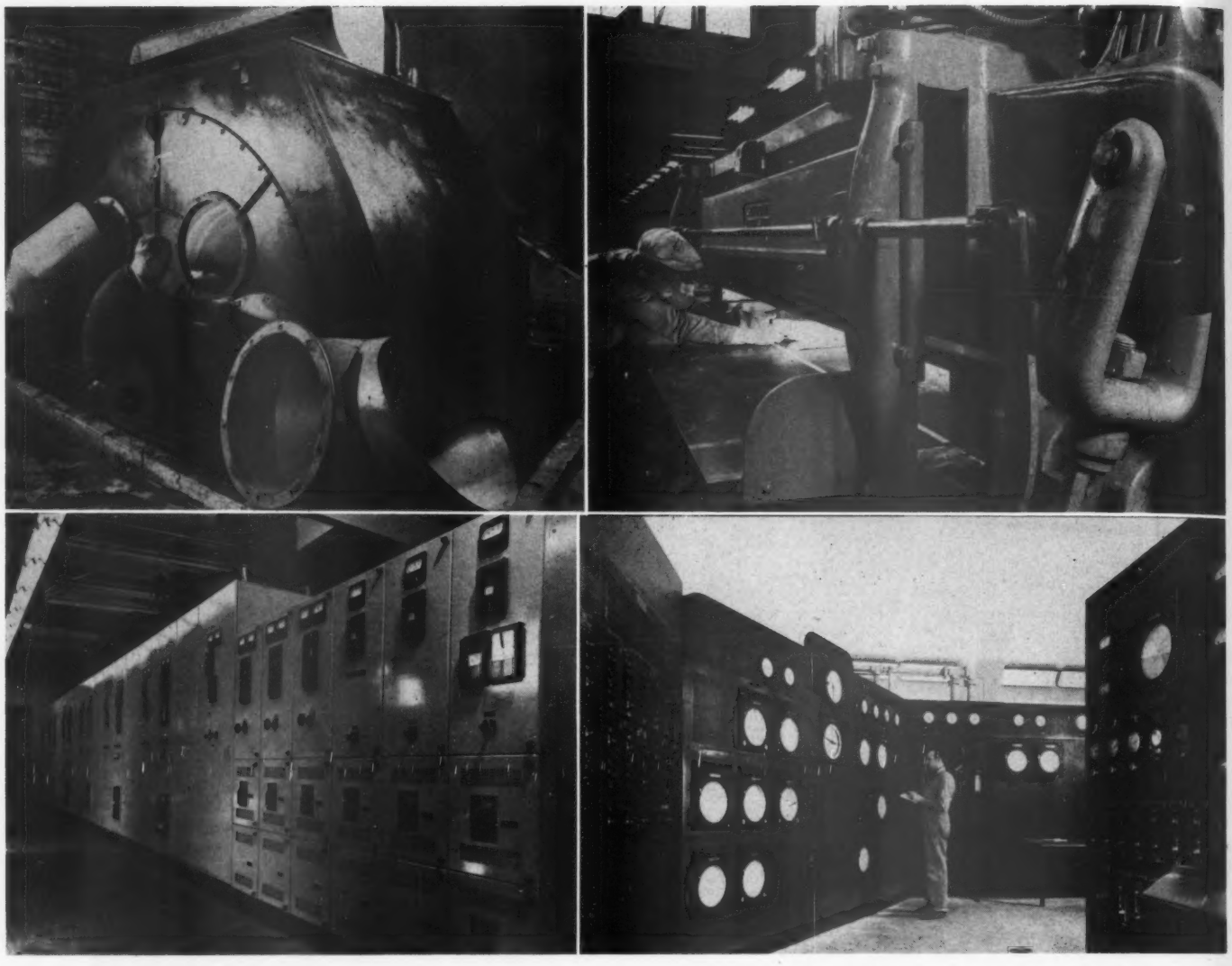


Big Bird Screens are delivering clean, uniform, well individualized fibres up to the maximum speed of the two big machines making machine-coated paper at Crown-Zellerbach Corporation's West Linn mill.

For better paper and more of it per day at lowest screening cost per ton, Bird Screens have become standard the world over.

85% of all the paper made in North America passes through
BIRD SCREENS

BIRD MACHINE COMPANY • **South Walpole, Massachusetts**



NEW OPERATIONS IN THE WEST LINN MILL:

Top left—Here is a 2300-hp. G.E. No. 24 Grinder motor, and picture shows how outlet air duct is removed and a water tight plate bolted in its place when flood emergency arises. In a flood a few months ago, this control equipment was proved adequate. This motor was submerged 48 hours and resumed operation immediately after water receded.

Lower left—Westinghouse cubicle room for new substation consisting mainly of two banks of 3 Westinghouse 4,000 KVA transformers stepping down 57,000 volts to 11,000 volts.

Upper right—Harris, Seybold, Potter 94-inch precision sheet trimmer which is reputedly largest type cutter ever built for finishing printing papers.

Lower right—Top floor of new continuous bleach plant. Brown Instrument Co. panel is on left and Fischer-Porter rotameter controls are behind the operator.

sheet is principally coating clay imported from Georgia.

After the sheet is formed in the usual manner and run through the first battery of driers and calenders, it passes through a clay coating section and a second battery of driers. Thus the manufacturing and coating is carried on in a continuous web. The rolls are then removed to the supercalender room for a high gloss finish.

3. *Reduction of Fiber Loss to River*

Heretofore some fiber and filler has escaped to the Willamette river in white water from the paper machines. New save-all systems are now installed on the paper machines recovering practically all of these fibers which are returned to the "stock" system and made into paper, resulting in further economy of operation and improved river conditions. Almost no fiber now escapes to the river from these save-all equipped machines; in fact, the water is so clean it is re-used.

These new Sveen Pederson Saveall systems consist of a large tile tank into which all white water from the paper machines is routed. Bubbles are created by air vents operating from the bottom of the tanks. These force the "stock" or waste fiber to the surface where it is recovered by a series of automatically-operated skimmers.

4. *Modern Personnel Facilities*

Men and women employes are provided with extensive locker and shower rooms of glazed tile construction and equipped in accordance with the most modern of practices. They occupy nearly 9,000 square feet of floor space and contain 735 new lockers, 10 double tile showers and 4 Bradley circular, foot-controlled wash fountains, as well as other modern facilities. A new and modern fully-equipped lunch room for the women employes has also recently been completed.

The interior DuPont painting in the plant is a complete departure from the dull, drab single colors ordinarily used in industrial buildings. This has been done to bring about clear "3-dimensional" vision instead of the flat effect produced on the eyes by drab or dark painting of equipment, ceilings, walls and floors. One of its main advantages is in providing a color sensation or harmony which is continuously pleasant and easy to "live with."

5. *Increase in Employment*

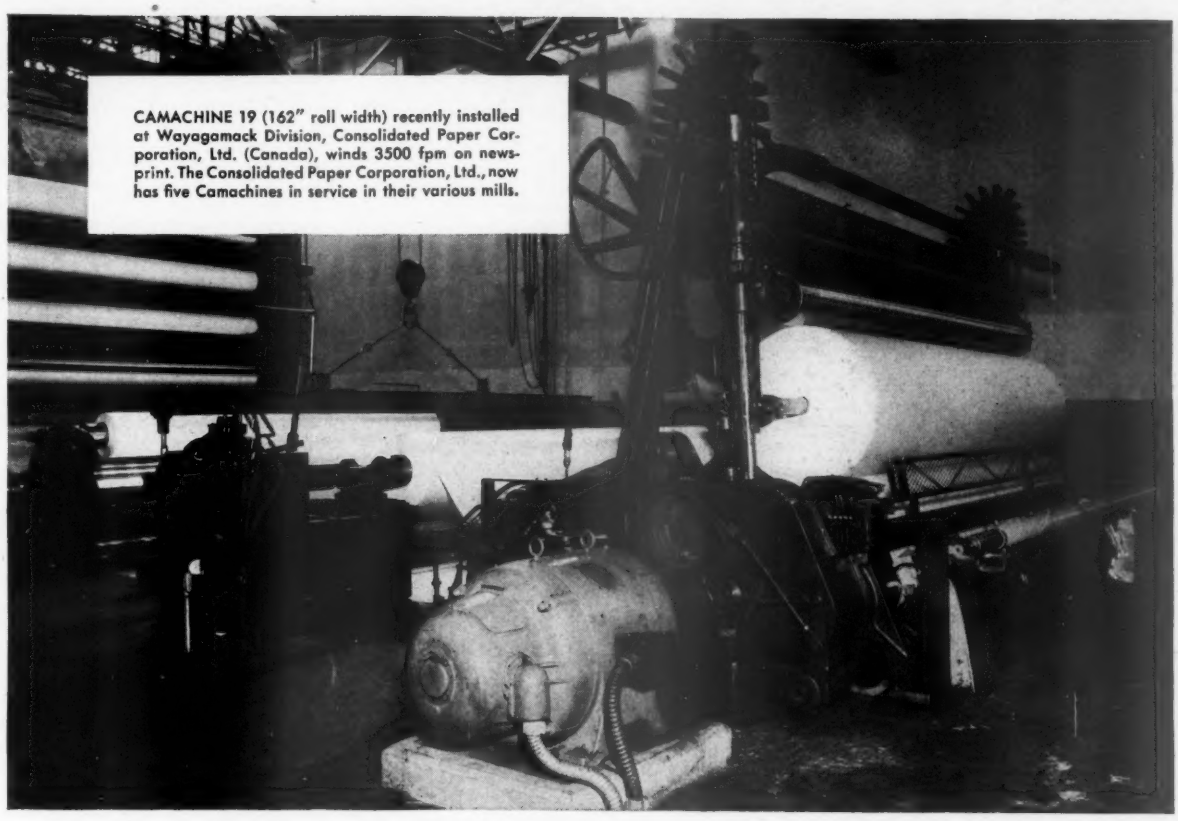
Total number of employes today averages about 1030, or 140 more than were employed prior to post-war construction and installations. On the basis of current rates of pay, the annual payroll of the West Linn papermill is $3,650,000, highest in the mill's history.

6. *Flood Protection; Other Groundwood Mill Changes*

Two separate pulp handling systems are now installed in the groundwood mill —one for special coated paper and the other for regular newsprint grades. Six of the water-powered grinder lines have

Camachines

...for top roll-winding efficiency at amazing high speeds



CAMACHINE 19 (162" roll width) recently installed at Wayagamack Division, Consolidated Paper Corporation, Ltd. (Canada), winds 3500 fpm on newsprint. The Consolidated Paper Corporation, Ltd., now has five Camachines in service in their various mills.

CAMACHINES, the world over, are keeping well ahead of the pace set by the fastest paper mills . . . producing top-quality shipping rolls of news, book, kraft and paper-board at speeds up to 5000 fpm on newsprint.

Clean-cut, wrinkle-free Camachine rolls, wound to uniform density from core to circumference, give smooth performance on the fastest of web printing presses and processing machines. Exclusive Camachine pneumatic web tension assures constant automatic control of the roll density even at the highest winding speeds.

Other exclusive new Camachine engineering features which are optional on the big mill-type Camachines are: the pneumatic brake on drive and idler roll; push-button controlled motor-driven riding-roll lift and roll ejector; and pneumatically controlled pressure on the cutter wheels and cutter spacer bar.

Write for illustrated literature on modern Camachine slitting and roll-winding equipment for all paper mill and converting plant requirements.

Cameron Machine Company, 61 Poplar St., Brooklyn 2, N.Y.

Camachines
FOR FAST, TOP QUALITY ROLL PRODUCTION
...the world over

been electrified with new General Electric 2300 horsepower motors designed to operate as driving units during low water and to serve as generators during high water.

Recurring floods of almost annual sequence here posed a problem to motors in the grinding room. Cooperation between the paper company and General Electric Co. developed a solution to the problem. All six of these new synchronous motors are built to withstand submersion, and are the first of their type ever constructed. The bearing pedestals, normally built outside the motor frame on standard motors, are enclosed with the stator and rotor in a specially fabricated steel sheel to protect them during shutdowns. The plates have ventilating holes to air-cool the motors when they are operating, but are completely sealed during flood periods. Air pressure through special silica gel air dryers, sufficient to overcome head pressure of the water is maintained while submerged to give added assurance that water does not enter.

A recent flood of Willamette river provided a conclusive-favorable test for the protection devices. Motors were submerged 48 hours, and all six resumed operation successfully when waters subsided.

7. *New Power Distribution Facilities*

Additional power for the expansion program is supplied by a new substation located adjacent to the filter plant on the hill above the mill. It consists mainly of two banks of three Westinghouse 4,000 KVA transformers to step down 57,000 volts to 11,000 volts distributed to the new installations and there again stepped down through transformers to the various group motor loads driving the new equipment. Distribution to the various points in the mill is made through the most modern cubicle type of unit switch gear.

8. *Clay Handling*

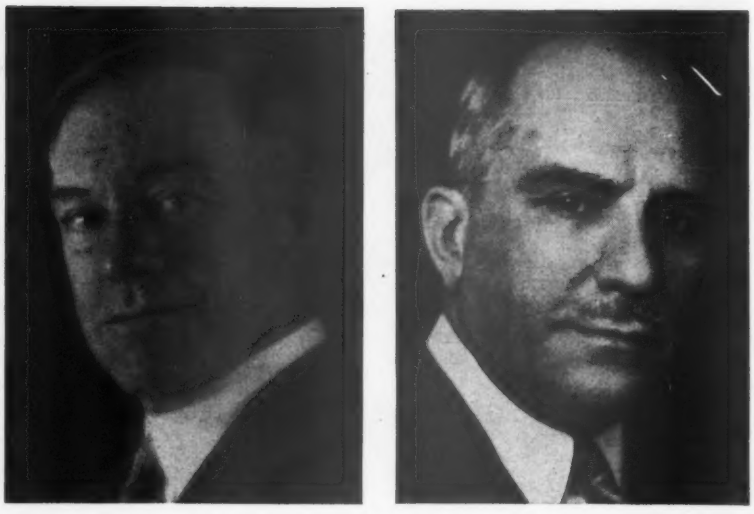
Annually 18,000 tons of clay in powdered form is being supplied to the West Linn mill by the Georgia Kaolin Co. of Dry Branch, Ga. This yearly consumption will require 450 railroad freight cars to transport the clay from Georgia to Oregon.

As the papermill is not accessible by rail directly, and since all clay arrives from Georgia in carload shipments, it was necessary to install three separate "airveyor" systems for transferring of powered clay to the coating preparation plant on the opposite side of the Willamette river from the Southern Pacific railroad.

The "Airveyor" system, manufactured by Fuller Co., Catasauqua, Penn., operates much like a household vacuum cleaner. It consists of a suction intake pipe, cycline, air lock and exhauster. Screw conveyors are used for distribution of the clay from the "Airveyor" units.

At Pulp Siding, across the river from West Linn and just south of Oregon City, is the nearest rail terminus to the mill. There the first "Airveyor" transfers clay from rail cars to a covered barge for transport across the river and through the locks around Oregon City Falls to the coating preparation plant. At the plant, the second unit of the system sucks clay from the barge and exhausts it into two 1500-ton clay storage tanks, through a system of screw conveyors that distributes the clay evenly in the storage tanks.

Clay is recovered from storage by a 5-inch reclaiming system Airveyor which again, by means of an enclosed screw conveyor, delivers to either of two clay weigh-hoppers. The storage tanks may be entered at three different levels to facilitate extracting the clay for the papermaking process. This system has a capacity of 7½ tons per hour.



GEORGE WILSON MEAD (left) and PETER J. MASSEY (right), who were principal figures in development of the machine coating process which has now been introduced in the Far West. Mr. Mead, as President of Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis., foresaw the future demands for high speed coating when he backed Mr. Massey in his pioneering work at the Wisconsin Rapids mill. Mr. Massey is now General Manager of St. Regis operations in Kalamazoo, Mich.

9. *Training Program*

One of the important phases of the new venture in paper manufacture has been the training program of all West Linn C-Z personnel who were to man coated printing paper operations. The program was headed up by C. A. Enghouse who was assisted by A. T. Gardner and R. W. Riley, two experienced supervisors with long experience in coated printing paper manufacture. Nine West Linn men were sent to Wisconsin for intensive training and operation in super-calender rewinder operation.

At West Linn a program of conferences, inspections, demonstrations and lectures were conducted on all phases of coated printing paper manufacture, from raw materials to final inspection of the finished product.

10. *The New Bleach Plant*

A new 75-ton bleach plant has been built and placed in operation. It is designed so that it can be expanded in the future to handle the capacity of a 250-ton soda pulp mill, which is embraced in the long-range plans of Crown Zellerbach Corp. The present installation has two stages of bleach-chlorine and hypochlorite. Complete operating control panel is made up into a single unit using Brown and Fischer-Porter instruments.

Operations are centralized in three control panels, one for each washer, and a main control panel where temperatures, pressure, flow of pulp and chemicals are automatically regulated.

This plant represents the only continuous sulfite bleach plant in the West and is controlled by automatic instruments to the point where only one man handles the entire bleaching operation.

11. *Technical Program*

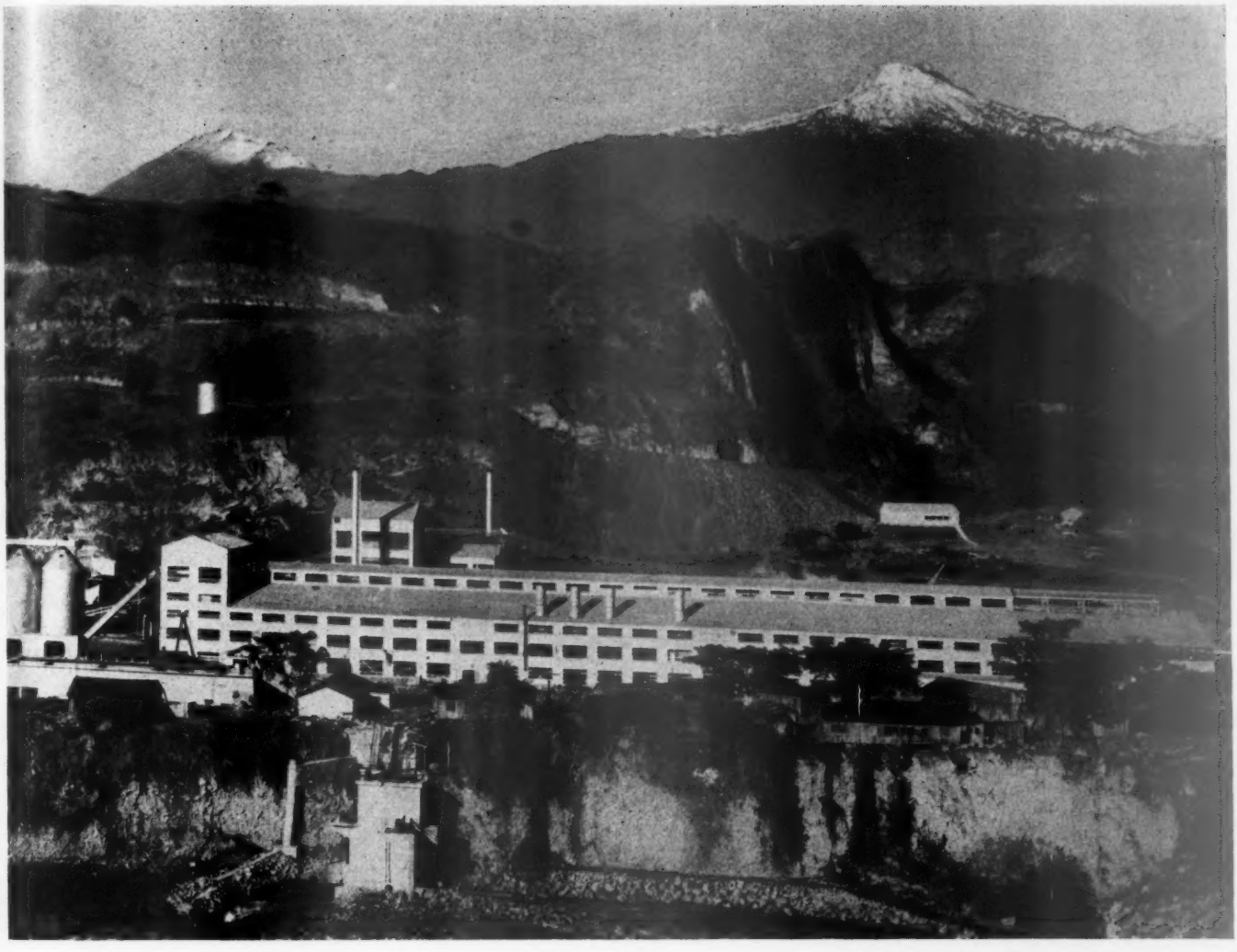
Prior to actual manufacture, the West Linn laboratory technical men conducted an extensive series of tests applying a large number of coating formulas to base stock of different furnish characteristics to develop the conditions required for producing the highest quality paper from western pulps. In collaboration with the publishers, a long-range research program of studying printing quality has been started so that the West Linn plant will be able to produce magazine papers of the highest quality.

Each roll of paper produced is carefully tested by trained technicians in a new and modern testing laboratory.

12. *Engineering*

While the West Linn program was one of the studies and decisions made by Crown Zellerbach's executive planning committee, responsibility for activating the development rested largely with the late Albert Bankus, who until the time of his death in May of 1947 was vice president in charge of manufacturing.

Actual planning, engineering and supervision of the construction at West Linn was accomplished by the Central Engineering Division staff of C-Z, located in Seattle. It was a smoothly coordinated engineering operation. At times crews of several contractors were at work at the same time on mills grounds. Manager E. H. Vicary, Seattle, was in charge and was assisted by Wilbur Lowndes, chief engineer, and other staff members. Field engineering was under supervision of John Moak who is now the new plant engineer at West Linn.



ANOTHER OUTSTANDING AND SUCCESSFUL GOSLIN-BIRMINGHAM INSTALLATION

The new Atenquique mill featured in the May issue of *Pulp and Paper* is equipped with a Goslin-Birmingham five-body, quadruple effect, long tube evaporator. Since this plant went into operation in January, 1947, this piece of G-B equipment has lived up to those high standards of efficiency, reliability, consistent performance, and low operational and maintenance costs which have been for years the outstanding and recognized characteristics of Goslin-Birmingham Multiple Effect Evaporators. For concentration of sulphate and soda pulp mill black liquor and spent sulphite acid liquors, G-B Evaporators have set the standard of the industry throughout the world.

G-B Evaporating Equipment is sound in material and construction from years of experience and constant redesign to improve mechanical details. These years of experience enable us to offer you competent advice on all your evaporation problems. Our engineers will be pleased to call on you at your request.

GOSLIN-BIRMINGHAM MANUFACTURING COMPANY, INC.

BIRMINGHAM, ALABAMA

CHICAGO—F. M. deBeers and Associates, 20 N. Wacker, Chicago, Illinois. NEW YORK—Goslin-Birmingham, 350 Madison Ave., New York 17, N. Y.

SOUTH

CHANGES in supervisory personnel of The Mead Corp. Southern division mills since the first of the year include: J. R. Buchanan, division manager at Harriman, Tenn., named manager of the mill at Sylvia, N. C.; P. F. Winkler, Nashville, Tenn., manager, named to run the mill at Harriman; Paul W. Hardesty, who was at Harriman, sent to be mill manager at Nashville.

W. T. WILKS has resigned his position as paper mill superintendent at St. Marys Kraft Co., St. Mary's, Ga.

WILBUR F. GILLESPIE, technical director of Gaylord Container Corp., and his wife, Estelle, almost got marooned by road slides and washouts in the wilds of Rocky Mountain region, on their recent trip to the Pacific Coast. They left the Soo Line at Shelby, Mont., hoping to get through to Calgary, Alberta, by bus. But there were no buses either and they finally hitch-hiked it.

DR. KARL R. KARLSON, plant manager for Alabama Pulp & Paper and Florida Pulp & Paper mills at Cantonment, Fla., as been elected president of a new Rotary International unit established at Cantonment with the assistance of the Pensacola Rotary Club. Meetings are held each Wednesday at Harvester's Hotel.

GORDON K. SINGLETARY, plant manager at Brunswick Pulp & Paper Co., Brunswick, Ga., made a trip to the Pacific Coast where he visited some of the mills during May. He was also present at the big Coast meeting at Gearhart, Ore.

FRED B. DOHERTY has been named assistant resident manager of the Rayonier mill at Fernandina, Florida, according to announcement by Edward Bartsch, president. Mr. Doherty is a graduate of the University of Washington in chemical engineering, and has been associated with Rayonier since 1933 when he joined the Grays Harbor Division in Washington. In 1935, he was transferred to Port Angeles, Wash., and later to the Central Chemical Laboratory at Shelton, Wash., where he assisted Dr. Arthur Parrett in research on southern pine. In 1939, Mr. Doherty became tour foreman at Shelton. In 1941 he entered the Naval Reserve, attained rank of commander, and was in command of a 10,000-ton ship. He returned to Shelton and was a superintendent there when transferred to Fernandina.

WAYNE LINDGREN, P. O. Box 1082, Savannah, Ga., will cover the Southeastern United States for Pacific Car and Foundry Co., makers of Carco pulpwood logging equipment. Mr. Lindgren has had long experience in aircraft engineering and flight training. He received tractor equipment indoctrination during a period of employment at Pacific Car's plant at Renton, Wash.

J. M. MURRAY, pulp and paper mill superintendent at Gaylord Container Corp., Bogalusa, La., is making a trip this year to Berlin, N. H., to visit his son who is employed there by Brown Co.

JOHN A. REAGAN, JR., editor of *Sonoco News*, the house organ of Sonoco Products Company, Hartsville, South Carolina, was elected president of the American Association of Industrial Editors, at their annual convention in Philadelphia recently.

PACIFIC COAST

Frank Wilder Dies

Frank P. Wilder, for many years a representative of leading manufacturing and supply forms for the pulp and paper industry on the Pacific Coast, and also widely known in the eastern papermaking centers where his career started, died suddenly at his Portland, Ore., home in early May.

His widow accompanied the body to Carthage, N. Y., their home town, for burial.

Mr. Wilder represented Downingtown Mfg. Co., Cheney Bigelow Wire Works, DeZurik Shower Co., Waterbury & Sons and Carthage Machine Co. on the Pacific Coast. He had only recently accompanied J. P. Abercrombie, vice president of Cheney Bigelow, on a visit to a number of coast mills.

H. A. "Gob" DES MARAIS, Pacific Coast manager of General Dyestuff Corp., 37 Clementina St., Calif., after attending the Gearhart, Ore., convention drove two Finnish visitors to this country in his car to California. His guests were Heikki Sihtola, manager of the Veitsiluoto Osakeyhtio mill at Kemi, Finland, and Matti Jalkanen, manager of Rauma-Raahe Oy., Rauma, Finland.

SIDNEY COLLIER, assistant superintendent, Puget Sound Pulp & Timber Co., had an earlier opportunity to be host to the two Finnish mill managers named above. Mr. Collier took them on a trip to the new Bloedel, Stewart & Welch kraft mill on Vancouver Island from Bellingham. Mr. Sihtola formerly worked on a scholarship at the Soundview Pulp Co.

JOHN G. VOLLMAR, a veteran of 35 years with the Crown Zellerbach Corp., has been appointed traffic manager of the company with headquarters in San Francisco, succeeding John J. Seid, who has been with the company 34 years. Mr. Seid has retired to garden and to ranch.

ERNEST DUTCHER, Safety engineer of the Pioneer Division of the Flintkote Co., Los Angeles, has been named vice president of the 10th Annual Western Safety Conference to be held in Los Angeles, June 16-18. Mr. Dutcher will help preside over the 3-day conclave which will be attended by over 2,000 delegates from Alaska to Mexico.

Robert G. Mispley Appointed to New Position

Appointment of Robert G. Mispley to a new position at the Crown Zellerbach mill in Camas, Wash., has been announced by Frank Drumb, resident manager. Mr. Mispley will be supervisor of quality and development in the Camas mill, reporting to Mr. Drumb.

This position has been created to put quality on the management level as a mill responsibility and as a result of the general up-grading of products of this highly diversified mill. Mr. Mispley moves to the mill from his position as assistant director of the Central Research and Technical Department, where for a number of years he served under W. R. Barber in work that entailed considerable traveling over the United States.

Ralph Waldo Was First Dyestuffs Man on Coast

Ralph Waldo, who ended 38 years as a dyestuffs representative on the Pacific Coast when he recently retired, is taking things easy at his home in Lafayette, Calif. It was announced in a recent issue that Mr. Waldo handed over the Pacific Coast management of the National Analine Division of Allied Chemical & Dye Corp. to Harris B. Fenn, who moved to San Francisco headquarters from Portland, Ore.

Mr. Waldo was the first dyestuffs man on the Pacific Coast. During the last 28 of his 38 years on the Coast he was National Analine's Pacific Coast manager.

HUGH K. WICKETT, from the KVP Ltd., kraft pulp mill at Espanola, Canada, where he was foreman, has joined Weyerhaeuser Timber Co. in Longview, Wash., as a shift foreman in the new kraft pulp mill there. George Beisse, formerly a shift foreman in the Weyerhaeuser sulfite mill at Longview, has moved over to the kraft mill as foreman. Gordon Kirkpatrick, sulfite cook, has succeeded him as sulfite foreman.

M. F. STEWART, from the accounting department of the Weyerhaeuser pulp division at Longview, Wash., has been transfered to Springfield, Ore., as chief accountant for the new Weyerhaeuser kraft pulp and board mill being built there. Another Springfield appointment is that of Lee Atwell as storekeeper. He was assistant storekeeper at the Everett pulp mill. It was previously announced that H. C. Phelps was appointed purchasing agent for all Weyerhaeuser operations at Springfield, including the sawmill.

ED VOHS, formerly with a paper firm's engineering office in Seattle, is now with the Weyerhaeuser Timber Co.'s engineering department in Tacoma, Wash., where he is working on developments in connection with the new Springfield, Ore., container board mill being projected by Weyerhaeuser.

FRED HUNT, carpenter for Puget Sound Pulp & Timber Co., came in second in the fly casting events held in connection with the Bellingham Blossom Time Festival held in early May.

"The most effective way to encourage the growing of trees is to develop profitable reasons for cutting them down." — (A. G. T. Moore, Southern Pine Assn. executive, in 1938).

40% MORE WOOD PER MAN IN QUEBEC

Tractor-Mounted Winches and Hoists Increase Efficiency

This is a Pacific Car & Foundry Co. (CARCO) double drum R. Hoist using a portable spar on an Allis-Chalmers HD 19 tractor. A frame is especially worked out to carry the spar and set it up. When the spar pole is moved, it is lifted off the ground by the R. Hoist and is lashed to the A. frame. The lashing lines are cinched up by the hoist.

One big eastern Canadian pulpwood operation has acquired a "new look." At the Forestville camp of Anglo-Canadian Pulp & Paper Mills in Quebec, west coast logging methods on a madified scale to conform with local conditions have been introduced, and they are resulting in increased efficiency and production.

Under the new regime at Forestville and its tributary camps the company has been producing at least 40% more wood per man, and operations have been maintained the year round without regard for condition of the roads, snowfall and other seasonal factors. They are cutting spruce which averages two ft. in diameter.

"The idea is working out well all round," H. D. Ruthman, woods manager of Anglo-Canadian, told **PULP & PAPER** in Montreal recently. "For one thing, we are able to appeal to a better type of labor, for which we are glad to pay higher wages. Our man engaged in mechanized logging is superior in intelligence to the old-style woods worker, does a better job and doesn't show a tendency to drift. He stays on the job because he likes it."

Anglo-Canadian is one of the most progressive pulp and paper companies in Canada and had a definitely practical objective in adopting mechanized methods. It wasn't just so much philanthropy that dictated the decision, even though the company happens incidentally to be making an important contribution towards improvement of woods camp morale. The company has spent about $600,000 in its mechanization program.

"If the industry during the next 30 years gives the same attention to the woods as it has given to the mills during the past 30 years, the forest situation will make corresponding improvement," says Elliott M. Little, president of the company. "We have made plenty of progress in pulp and paper manufacturing; woods operations have been largely neglected. Newsprint is now being produced for one man-day per ton compared with three man-days 30 years ago. It used to take a ton of coal in eastern Canadian mills to make one ton of paper; now it requires only 800 pounds of coal. Mechanization can effect the same improvement in efficiency in the woods."

Mr. Ruthman points out that the old-time operations in a pulpwood camp were anything but easy and pleasant. All the lifting and manual handling of pulpwood was a back-training task.

"Men who are willing to do that type of work are scarcer than they used to be," says Mr. Ruthman . "They're looking for employment that isn't so tough. The only way to get good men today is to make the job attractive, and we believe that mechanization makes it that, especially for the right kind of men."

"Forestville, located on the Quebec-Baie Comeau highway, is Anglo-Canadian's wood headquarters, and most of the logging operations radiate from there. The company runs a series of woods camps, most of them being still of the conventional type; but the two mechanized camps recently equipped produce as much as all the others combined—about 300,000 cords a year. Mechanization has reduced costs materially. It is said that wood is being put on the cars at around $16 per cord.

Mechanization Ends Guesswork

One of the reasons for adopting mechanization was the desire to eliminate guesswork in output and costs, according to President Little. "A paper mill can estimate its production and costs pretty accurately," he says. "But when it comes to estimating wood cutting, costs have never been dependable because we have never known how many men we would have, nor have we been able to count on the weather. With mechanized logging it's easier to figure these things out because we have closer control over production."

Until recently some woods camps in Quebec worked according to a philosophy developed in the depression era when men were not too particular about the conditions under which they worked The type of labor attracted by most of the camps was seasonal mostly marginal farmers who looked after the crops in the

40% MORE WOOD PER MAN

with CARCO winches, hoists, arches and sulkies

CARCO

—and 40% more wood per man is only a beginning. A CARCO Sulky-Winch team will *triple* log output over ground skidding methods. A tractor mounted CARCO Hoist, high leading from a portable spar, can profitably cold-deck pulp logs from steep sides or through standing timber. CARCO equipment and methods have been paying off for loggers for forty years.

- **THE CARCO JUNIOR SULKY AND "S" WINCH TEAM** makes arch logging possible for small tractors from 15 to 30 HP. For fast delivery of small loads or where logs are scattered, this midget Sulky and 6,000-lb.-pull Winch brings in clean logs.
- **THE CARCO STANDARD SULKY AND "E" WINCH TEAM** for tractors to 45 HP arches larger loads of small logs. If traction is poor due to rain, a Winch-Sulky rig keeps you in the woods longer. To haul over a slick or bog, drop the load, go ahead to firm ground, paying out line. Then winch up load and proceed.
- **A CARCO "R" HOIST** equipped tractor coupled to a portable spar can go into a heavy stand or rough terrain where arching is impractical and do a quick job of cold-decking. Many loggers are now producing pulpwood profits from otherwise waste trees by pre-logging with a mobile spar.
- **THERE IS A CARCO WINCH OR HOIST FOR NEARLY EVERY CRAWLER TRACTOR EVER MADE AND AN ARCH OR SULKY FOR EVERY LOGGING JOB.**

SEND A POSTCARD FOR THE LATEST INFORMATION ON MECHANIZED PULPWOOD LOGGING.

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PAPER · · · America's 6th Industry

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The Puseyjones Organization is now devoting itself completely to the design and construction of Paper-Making Machinery built to new high standards of speed and efficiency, and to the modernization of existing machines. Additional capacity in Metals Fabrication is now available through conversion of facilities formerly devoted to the building of ships.

Puseyjones Engineers will welcome the opportunity to work with you in solving production problems.

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THE SIGN OF TRADE MARK SUPERIOR QUALITY

ANGLO-CANADIAN EQUIPMENT: Upper, left: Special decking equipment developed by Link-Belt for Anglo-Canadian's logging in Quebec. Its spar is much higher than gin-pole ordinarily used and rate of travel of hauling cable faster, due to torque converter on winch. Spar is mounted on Caterpillar tractor. Upper, right: Portable camps, each building accomodating twelve men, are cosy, warm and comfortable. Lower, left: Allis-Chalmers HD-19 and HD-14 tractors are used for bulldozing and road construction, as well as Caterpillar D-8's. Lower, right: Allis-Chalmers HD-19 tractor with CARCO J winch, made by Pacific Car & Foundry Co. of Renton, Wn. The tractor begins treacherous descent here down a 10% grade to bring capacity load to the mill. This is world's largest crawler tractor.

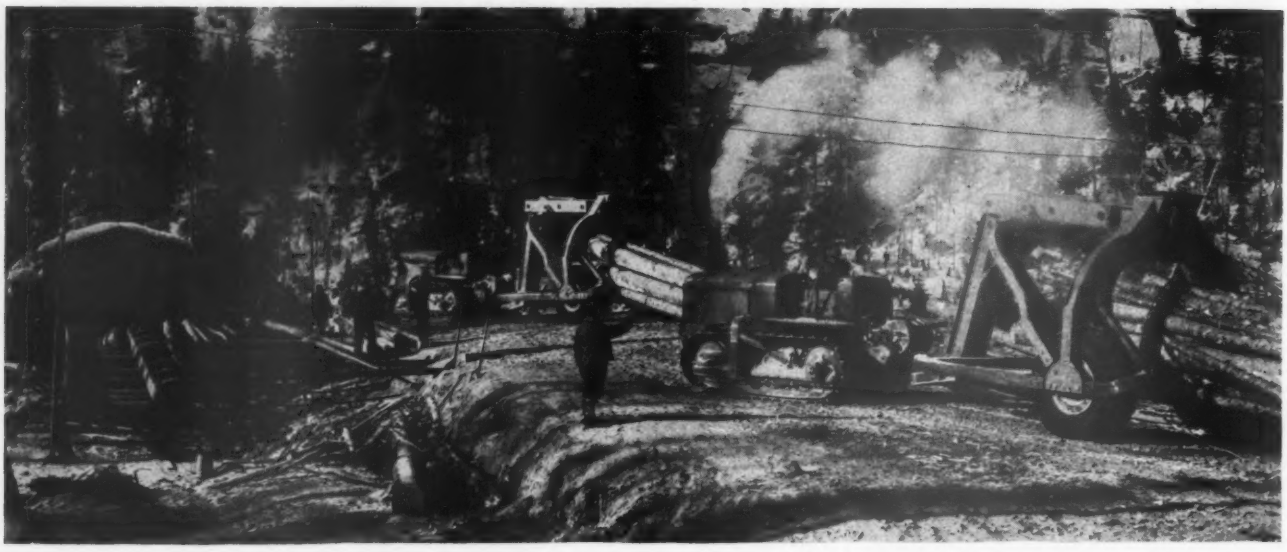
spring and summer and went to the woods in fall and winter. Full-time jobs didn't appeal to them, partly because camp conditions were usually pretty depressing.

Anglo-Canadian and the other progressive companies in Eastern Canada which have adopted a mechanized system are changing all that. In addition to doing a lot of the back-breaking jobs in the woods with machines; they are providing clean, comfortable, mobile camps.

Mechanical operations at Anglo-Canadian's woods division are under the direction of Mr. Ruthman as manager; J. D. Stirling, general superintendent; I. E. Cheeseman, divisional superintendent; P. J. Goldsmith, superintendent of No. 1 mechanical camp, and C. Lamothe, superintendent of No. 2 mechanical camp. T. B. Little, brother of President Elliott Little, is development engineer and has planned many features of the operation. James O'Halloran is chief engineer. General foreman under Goldsmith is Camille Courcy and under Lamothe, Willie Lovare.

Equipment in Use

No. 2 unit has the following equipment: Twelve HD-7 Allis Chalmers tractors with Carco double drum Model R Hoists for decking; six HD-14 Allis-Chalmers tractors with Carco single drum Model HS winches for hauling; four 10-cord sulkies for hauling; two 5-cord Hyster sulkies for hauling; two HD-14 Allis-Chalmers tractors with single drum winches including a Carco F Model and Baker gradebuilders for road-making; one triple islde saw complete with chain feeder conveyer; roller conveyer and discharge conveyer made by Anglo-Canadian and driven by electric motors; two 40-L.W. General Motors diesel generator sets for supplying electrical power to the triple slide saw developed by Anglo-Canadian for cutting the wood into four-foot lengths; one HD-5 Allis-Chalmers tractor with Carco single drum E-winch for general work. The Carco



A DIESEL-ELECTRIC CUT-UP PLANT (left), developed by Anglo-Canadian at Camp No. 2. Logs are brought in by sulkies, hauled by Allis-Chalmers HD-14 tractors with a CARCO single drum H-5 winch (made by Pacific Car & Foundry Co. of Renton, Wn.). They are moved by conveyors to the triple saws and cut into standard 4-ft. pulpwood bolts.

winches and hoists are manufactured by Pacific Car & Foundry Co., Renton, Wash.

No. 1 unit is at present using the following equipment: Seven Caterpillar D-4 tractors with Hyster double donkeys for decking; three Caterpillar D-6 tractors with Hyster double drum donkeys for decking; five Caterpillar D-7 tractors with Hyster single drum winches for hauling; seven 10-cord sulkies made by Anglo-Canadian for hauling; two 5-cord Hyster sulkies; two Caterpillar D-7 tractors with Hyster single drum winches and LaPlante Choate grade builders for road-making; one triple swing saw complete with chain feeder conveyer, roller conveyer and discharge conveyer made by Anglo Canadian and driven by a Chrysler T-120 industrial engine.

At its present stage of development the mechanization of woods operations as practised by Anglo-Canadian consists of four main phases—felling, decking, hauling, sawing.

The falling operation consists of falling and branching the trees. This is still mainly a manual job with buck-saws and power saws have so far not made much of an inroad there because of the difference in weight. The trees are felled in strips 50 feet wide by 400 feet long in such a way that the tips of the trees form a V, pointing towards the main road, towards which they are pulled by a decking unit during the second operation. No bucking is done in the woods. All logs are taken out in tree lengths.

The high lead yarding and decking operation involves the use of a gin pole set up on the center line of the strip at the edge of the main road. A power-driven double drum winch hauled on a tractor is set up on the opposite side of the main road from the gin pole, and haul-in and haul-back lines are run from the winch over blocks suspended from the top of the gin pole. The haul-in line is run down the center line of the strip and the end is connected to the haul-back line which is run through two return blocks which are anchored to stumps at the far end of the strip.

By this means the 9/16-inch haul-back line is run from the outer edge of the strip back over the gin pole to the winch. The main line consists of 3/4 inch wire rope. At the end of the haul-in line where it joins the haul-back line a group of choker slings, consisting of 4 x 6 slings, depending on the size of the trees, made of 7/16 inch wire rope about seven feet long, are suspended. By this means the logs are hauled in and piled in bundles on top of a one inch wire rope sling ready for hauling. These bundles usually contain from five to ten cords of wood in tree lengths.

The equipment used for decking usually consists of a Caterpillar D-4 tractor with double drum Hyster winch or an Allis-Chalmers HD-7 tractor with Carco Model R Hoist manufactured by Pacific Car & Foundry Co. These machines work in conjunction with a wood gin pole 30 feet high.

The third operation consists of hauling the bundles of tree lengths from the decking site to the sawing site. This hauling is done by means of a sulky hauled by a D-7 Caterpillar tractor or an Allis-Chalmers HD-14 tractor with a single drum winch. The tree bundles are slung at a distance of about 7 feet from the tree tips and suspended under the arch of the sulky. The butt ends are dragged along the ground. By this means about half of the weight of the trees is carried on the sulky wheels and the other half is resting on the ground.

They have hauled the tree lengths in 10 cord units with the big arches as far as three miles but are trying hard to shorten this haul. There has been talk of building truck roads into the timber and thus shorten or eliminate the long tractor and arch haul, but so far no trucks have been so employed.

The sulkies now being used are a modification of Anglo-Canadian of the stand-Hyster logging sulky. These sulkies are designed to haul ten cords of tree length wood in one load and are mounted on 18 x 24 x 20 ply tires.

The fourth operation consists of sawing the tree lengths into four foot lengths. The saw consists of three power-driven circular saws mounted on a steel frame-work alongside a roller conveyer. The trees are hauled alongside the roller conveyer and dropped on the ground. They are rolled from this position on to a feeder chain conveyer which carries them to the roller conveyer.

The roller conveyer then carries the trees along in front of the three circular saws. The operator can start and stop this conveyer at will. A batch of trees is run along the roller conveyer until the butt ends reach a stop. The first, second and third saws are located four feet, eight feet and twelve feet respectively from the stop. The saws are then fed one after the other across the conveyer and so cut three four-foot blocks from each tree. The last 12 feet of the roller conveyer consists of a rocking table operated by means of an oil cylinder. After sawing the 4-foot lengths are dumped by means of this rocking table.

Anglo-Canadian is also using a Link-Belt Speeder crane in its mechanized logging operations. This machine has been used very effectively for skidding logs to the tractor road. By setting the crane at the road it can get the logs off strips 500 feet deep and 400 feet wide with great ease. In some situations they have found this set-up fits into the picture in good shape.

During summer operation the ideal saw site is on the river bank and the four-foot wood is dumped from the saw directly into the river. During the winter operation the blocks are dumped from the saw into a stacker conveyer which carries the blocks to a pile on top of the ice. During operations which are too far from the desired river location, the blocks are carried by the stacker conveyer to a point high enough to load into dump trucks, which carry the wood to a suitable dumping spot on the river.

There are two sawing units in use at

Cut THEM Down With PIONEER

WEIGHS ONLY **28** POUNDS LESS CUTTING ATTACHMENT

ONE MAN POWER SAWS

THE LIGHTEST POWER CHAIN SAW ON THE MARKET TODAY - REVOLUTIONARY

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A DELUXE MODEL AT NO EXTRA COST

The "PIONEER" with its revolutionary new MULTIPORT engine is the answer to a great demand for a one-man chain power saw which will give continuous reliable service under all working conditions, and will efficiently handle up to 30" cutting attachments. There is no excess weight on the "PIONEER." Ideal for falling, bucking and limbing logs for lumber, pulpwood, cordwood, fence posts, mine props and railway ties. Also handy on construction work. Available 14", 18", 24" and 30" cutting attachments. — Dealer Inquiries Invited.

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present, both of which were designed and built by Anglo-Canadian. The first unit uses 48 inch diameter circular saws suspended on swing arms of which the rotating saws can be swung across the conveyer, which is 36 inches wide. This unit is driven mechanically by a gasoline or diesel engine of about 65 horsepower. The second unit uses 60 inch diameter circular saws mounted in sliding carriages by means of which the saws can slide back and forth across the conveyer, which is 60 inches wide. This unit is driven electrically and the sliding carriage has motor and saw mounted on it so that saw and motor slide together. The power is supplied by diesel generator sets.

The economical range of operation at present would seem to be about two miles radius from the saw site. When all the wood has been harvested from this area the saw and camp site are moved to a new location, the camps being transported on skids or on floats depending on the distance and other conditions.

By building mobile camps that can be used for a long period it is possible to have them of superior construction. The camps have electric lighting. There are spring beds for the men, and meals are served cafeteria style—an innovation for eastern camps.

The company has modernly equipped shops at Forestville where all sorts of major machine jobs can be handled. In addition they have portable shops right out in the woods for emergency work. these are built of steel, consisting of three sections and mounted on skids, so that they can be quickly taken apart and moved to a new location, and are always right up on the logging front.

T. B. "Ben" LITTLE, left, Development Engineer, Anglo-Canadian; and I. E. CHEESEMAN, right, Logging Supt., and known as, "Cheese" to thousands of Eastern Canadian loggers.

THIS IS ONE OF TWO MECHANICAL SAWS developed at Anglo-Canadian Pulp & Paper Co. This is at Camp No. 1.

South Wants to Use Radio in Woods

Support of a united forestry industries move to obtain allocation of short-wave radio wave bands for forest operations was authorized at the 33rd annual meeting of Southern Pine Association held in New Orleans April 7-9. Under the action taken the Conservation Department, under direction of W. C. Hammerle, association forester, may cooperate with individual forest land owners in the support of the national movement.

Many lumber and woodpulp manufacturers operate radio facilities in conjunction with their forestry departments. Communication has been limited to emergency service for fire control whereas greater efficiency would be achieved were these operations placed on such a basis as permitting frequent contact with crew trucks in the woods during the day.

Officers Re-Elected By Wisconsin Group

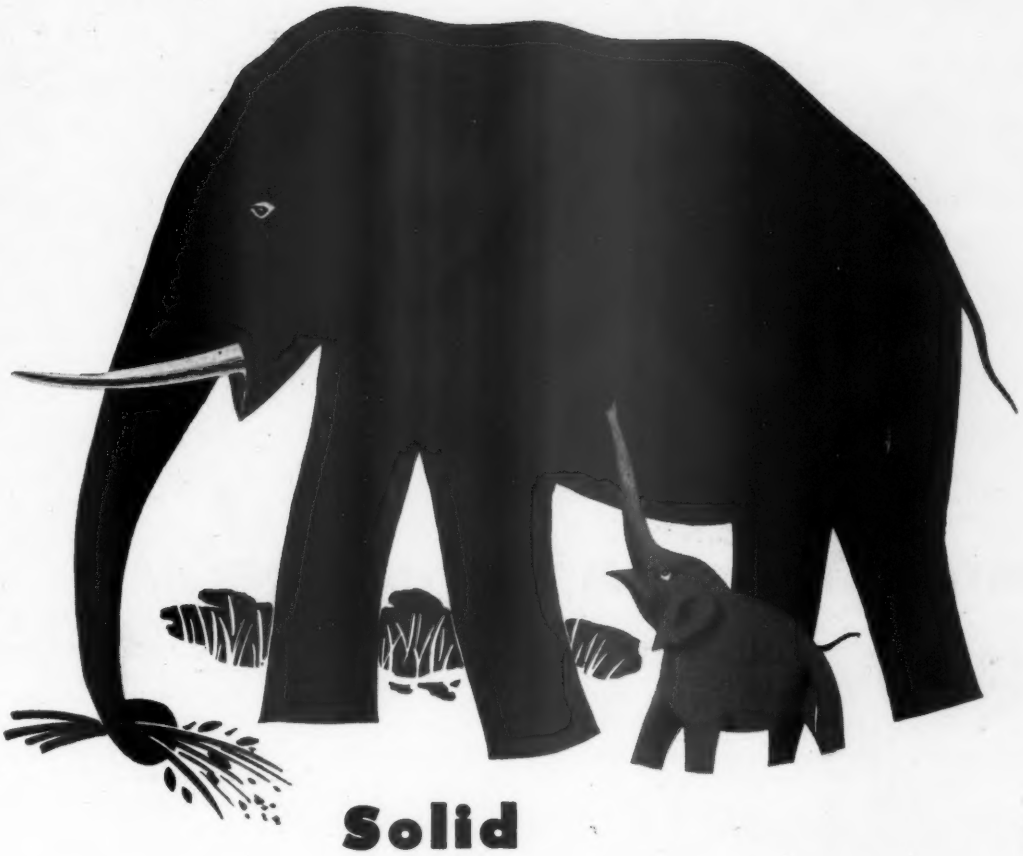
Folke Becker, president of Rhinelander Paper Co., has been re-elected president of Trees for Tomorrow, Inc. Other officers re-elected to the Wisconsin organization which distributed 500,000 trees and helped put 20,000 acres of small properties under forest management last year, are:

Vice presidents: Emmett Hurst, head of woodlands division, Consolidated Water Power and Paper Co., Wisconsin Rapids; and C. G. McLaren, vice president, National Container Corp., Tomahawk; secretary-treasurer, D. B. Smith, president, Ward Paper Co., Merrill; executive director, M. N. Taylor, Merrill.

Members of the board also include Carl Bronsted, general manager, Tomahawk Pulp Co.; Robert Caldwell, vice president, Rhinelander Paper Co.; Harold Collins, president, Wausau Paper Mills Co.; D. C. Everest, president, Marathon Corp.; Stanton W. Mead, vice president, Consolidated Water Power and Paper Co.; A. J. Schierl, secretary-treasurer, Whiting Plover Paper Co.; N. S. Stone, vice president, Mosinee Paper Mills Co.; E. E. Zahn, pulpwood department, Marathon Corp., and Leonard Kuehl, executive vice president, Flambeau Paper Co.

PACIFIC MILLS, LTD., has brought out a booklet entitled "Timber for Pacific Mills," illustrated with photographs showing how pulpwood for the big Ocean Falls mill originates. Annual log usage at the mill now approximates 120,000,000 board feet, and it is hoped to work out a plan for sustained yield.

THREE ANGLO-CANADIAN PULP & PAPER MEN: l to r: J. D. (Jock) STIRLING, General Woods Supt.; W. E. SOLES, Ass't. General Manager; ELLIOTT M. LITTLE, President and General Manager.



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from any weight or grade of paper or board.
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SLITTERS AND ROLL WINDERS

AIR VIEW OF THE NEW INTEGRATED ST. REGIS "kraft center" in North Pensacola, Fla. The Florida Pulp & Paper Co. plant is in the background; the new Alabama Pulp & Paper Co. and St. Regis multiwall bag plant are shown in the foreground. The two paper mills have a capacity of 450 tons of kraft paper daily. The bag plant has capacity for 250 million multiwalls annually.

INTEGRATION FROM TREE TO PAPER BAG

A New "Kraft Center"

ST. REGIS OFFICERS AND DIRECTORS at the Kraft Center (L. to R.): WILLARD J. DIXON, Vice President and Secretary; HENRY HILTON-GREEN, Exec. Vice President of Florida P&P; EDWARD R. GAY, Vice President, Packaging Div.; ROY K. FERGUSON, President; JAMES H. ALLEN, St. Regis Director and President of the two subsidiary companies; CARL B. MARTIN, Vice President; W. C. RIBENACK, Washington (D.C.) Consultant; A. D. PACE, St. Regis Director and Exec. Vice President-Treasurer of Florida P&P; WILLIAM H. VERSFELT, Vice President and Treasurer; HORACE R. LAMB, Counsel for St. Regis.

Fulfillment of one of the most significant changes in the industry was celebrated at Pensacola, Fla., April 15-17, when St. Regis Paper Co. and its friends formally marked the completion-into-production of a "kraft center" where a brand new paper mill's entire output moves directly into the largest multiwall bag plant in the world.

The completion of this project gives St. Regis a mammoth plant fed 250 tons of paper each day in a straight line operation originating in company-owned forests.

Here is one of the industry's outstanding examples of the present day trend toward complete integration. From pine seedlings to finished multiwall paper bags bearing the trademark of the product it will convey to the consumer, every step is taken at this "Kraft Center." Here is also the Florida Pulp and Paper Co. mill whose output, combined with that of the new mill, gives St. Regis 150,000 tons annually of paper and board.

The celebration was a three-day occasion because that's how much time is required to start through a bag plant of such size and trace the course back into the woods.

The new bag plant will produce 250 million multiwall bags annually; and a large number of small two-ply (2 lbs. to 10 lbs.) pockets used for sugar and other products.

The vision and undeviating efforts of two outstanding men stand back of the undertaking: Roy K. Ferguson, whose performance has been as president of St. Regis; and, James H. Allen, for over two decades an outstanding factor in Southern production and a recognized leader for good forest management and ownership.

The combining of these two leaderships not only produced the largest paper mill-bag plant integration of its kind in the world but has bulwarked the operation, and other St. Regis converting plants, with forest holdings to achieve economic fixation. The complete operations at North Pensacola embraces a total of 2200 employed in Florida Pulp and Paper Co.'s mill, Alabama Pulp & Paper Co.'s mill, and St. Regis Paper Co.'s bag plant. Back of these units are 1800 employed directly and indirectly in the woods.

It was two years ago that plans were laid. Florida Pulp & Paper's president had long preached forest protection and management in the Pensacola territory. The company owned 177,000 acres of highly potential pulpwood. Florida company became a St. Regis subsidiary by stock exchange. Mr. Ferguson became chairman of the board of Florida; James H. Allen and A. D. Pace became directors of St. Regis. Contracts were let for the new mill and bag plant.

Forest land ownership was more than doubled. Then, because the insatiable demand swamped the state's production, a new nursery was started by the company near Pensacola where 7,000,000 pine seedlings will be grown annually so that understocked lands may be filled with pine trees to get maximum production of wood per acre. These seedlings are also for the company's friends—those who grow trees and sell pulpwood to the mill. Pine seedlings are put out in the field with a machine drawn by a tractor—8,000 seedlings per day.

In addition to its own company lands,

are you having RIVET TROUBLE?

O-KNI-CO-LOK dis-assembled. Ordinary slitter knife is in center. Note small button on the O-KNI-CO-LOK which fits into any rivet hole on slitter knives of this type.

ELIMINATE IT WITH O-KNI-CO-LOK

Only seconds are required to assemble or dis-assemble the new O-KNI-CO-LOK slitter! These two operations are completed by means of a spanner wrench.

The projecting button shown on the O-KNI-CO-LOK above, slips into any of the holes designed for all rivet type slitters. Knife is held firmly in place and locked to the shaft. Nut continues to tighten as assembly revolves.

Order your O-KNI-CO-LOK slitters today and save time and money. Immediate delivery!

Method and ease by which knife may be assembled. Eliminates all rivet trouble.

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Gentlemen: Please send me without obligation specific data O-KNI-CO-LOK for Slitter Knives.

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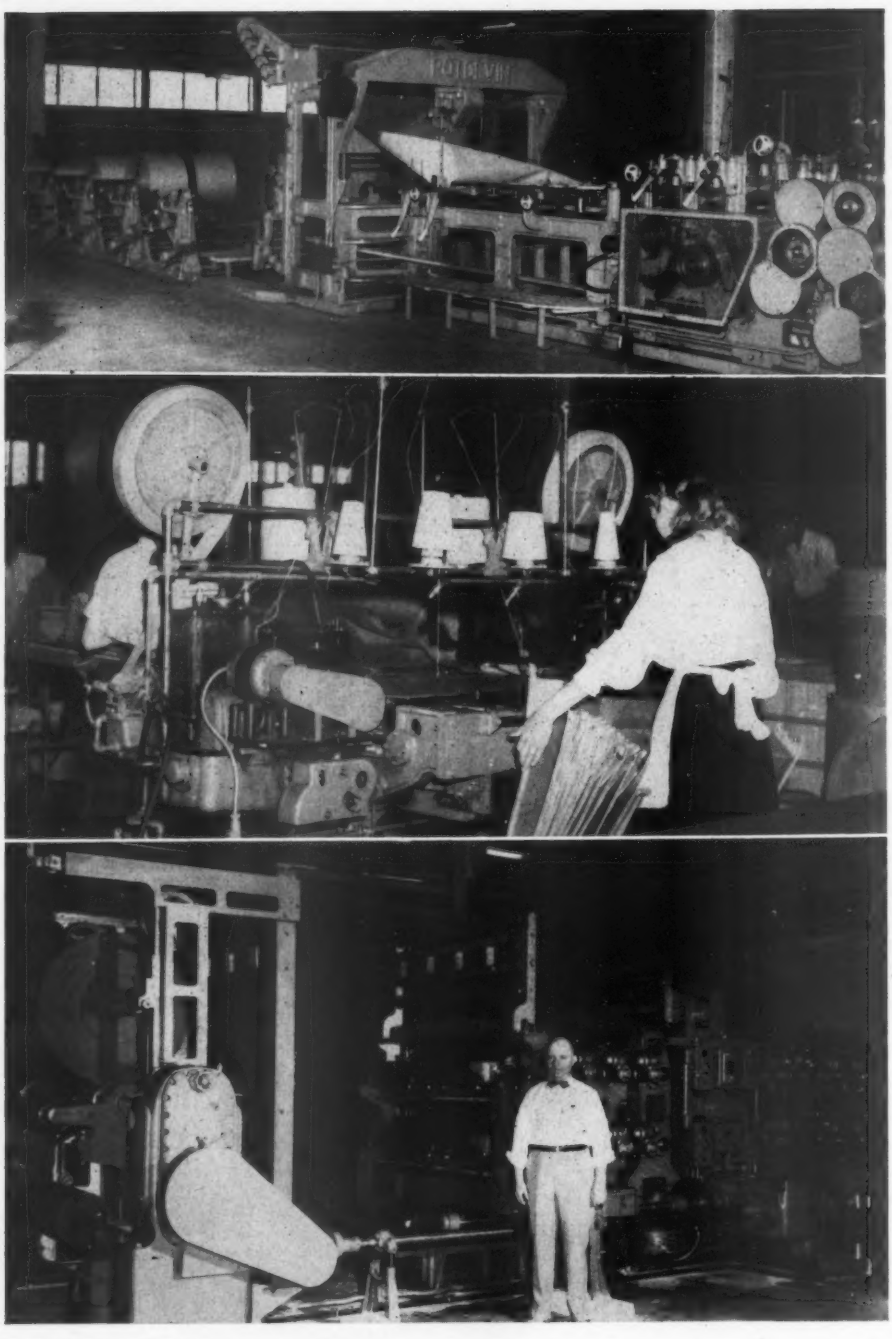

ST. REGIS EQUIPMENT:

Upper view—Multiwall tuber can make up to six ply 100 lb. size bags at top speed. It is one of four backed by a sewing operation. The machine has a Reliance VS. control unit.

Middle view—Sewing up the 100-lb multiwall bag at St. Regis new mammoth plant at North Pensacola, Fla. The conveyor belt for inspection and delivery to bundling machine is behind operator.

Lower view—Edwin E. Burroughs, chief engineer of Multiwall Bag Div., stands in front of high speed (850 per minute) 4-color webb printing press. It's his design, and was built in St. Regis Engineering and Machine Div., Oswego, N. Y.

St. Regis has obtained a long term lease on the 208,540-acre "Suwanee Forest" which has been under good private forest ownership since 1925 and of itself could supply a pulp mill.

The integrated mill and bag plant were inspected by 95 distinguished guests—St. Regis directors, officers and their friends —who arrived by special train from New York. High point was a banquet on the night of 16th in which Mr. Allen was extolled by Mr. Ferguson for his leadership and presented with a scroll by the Pensacola city government and chamber of commerce and Escanaba county. Over 300 leaders of the section attended.

On this occasion, Mr. Ferguson declared that paper mill products are facing an increased worldwide demand.

The Florida Pulp & Paper Co. mill began production Aug. 20, 1941, with initial capacity of 65 tons per day. It now produces 200 tons of paper and board and 250 tons of pulp daily. Its board and paper goes to St. Regis and other converting plants.

The general construction contract for the Alabama Pulp & Paper Co. mill was awarded Merritt, Chapman & Scott (New York) in May, 1946. Construction started in Nov., 1946, and paper production started Mar. 17, 1948. Its entire 250 ton daily production will go directly to the multiwall bag plant.

Expansion of the well planned town of North Pensacola continues.

Description of Equipment

The mill's woodyard is extensive and equipped to receive by both rail and trucks. Reserve supplies are handled by cranes. Pulpwood enters the mill by means of two Jeffrey conveyors served on one side by railroad car delivery and on the other by trucks. Each conveyor feeds a Fibre Making Process barker.

The wood room is equipped with Murray chippers, chip crusher, and Link-Belt screen. Chip storage is above the digesters and the feed is through Jeffrey hoppers. There are five digesters. The alkaline cooking process period runs to about three hours' time. Digester instrumentation is by Foxboro.

The brown stock goes through an Impco meter and regulator, de-knotter, and a three-stage closed counter current Impco washer. The de-knotter, the first of its make in the South, is under the same J. O. Ross Engineering Co. vapor hood as the washers—and precedes them. Instrumentation is by Bristol. The wash room is at the same level as the digester control floor and also carries a tank each for white liquor and strong liquor.

Provisions are incorporated at the washing phase to minimize foaming. In addition to the washing system, Impco also furnished deckers, repulpers and saveall.

Screen room equipment includes eight Bird screens, which are followed by two large Impco deckers. The flat screen dilution to less than ½ of 1% is offset by the deckers removing the water and sending it back for re-use on the screens.

Stock comes back out of the chest through a consistency control and saveall for refining by an installation of twelve Shartle Bros. Miami No. 5 Westinghouse 350-h.p. motor driven jordans.

The refining room floor is entirely open to the paper machine room, there being a partition only in the upper level. Electrical control equipment in the refining room is placed on a mezzanine floor to avoid dampness. The paper machine room is well illuminated from windows on both sides, and provides an unusual amount of working space on both sides of the machine.

High Speed Machine

The Black-Clawson paper machine was balanced and designed for 2000 feet per minute; but its present furnish and service is for 1600 feet. As equipped it will produce 250 tons per day of finished multiwall grade specification paper.

It is driven by a Westinghouse sectional electronic drive, all movements and speed controls being electronically regulated and interlocked through a centralized

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★ COLOR
★ SERVICE
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Power saws, manned by husky, experienced loggers expedite the handling of the big, sturdy British Columbia Hemlock logs from which Powell River sulphite pulp is made. For superior strength and color, for dependability of service and supply, always buy unbleached sulphite pulp made by Powell River.

POWELL RIVER
Unbleached Sulphite Pulp

control switch board. The drier doctor is a Bird. Paper machine instruments are from Foxboro.

The head box was built by Valley Iron Works and its features include rectifying roll, adjustable slice with motor lift, and forced drainage. A disturbance of the wire will cause the slice to lift automatically. The shell is covered on the outside with lintkote, which aids housekeeping.

Twin 8-roll calenders semi-Pope reel, and type 20 Cameron Machine Co. winder and slitter, pneumatically operated under constant tension, are at the dry end.

Non-corrosive metal went into the shell and greater part of the Fourdrinier where stock is contacted. Stock is admitted to head box through an hydromatic inlet designed by Black-Clawson. The wire pit is made de-aerating by reversing the flow from the conventional type.

The 24-000 gpm fan pump is driven by a 300-h.p. synchronous motor and the magnetic clutch is controlled by a 7½-h.p. DC generator mounted on the end of the shaft. The entire installation is subject to a "Regutron," an electronic speed and excitation control for magnetic drive.

The 48-inch couch and suction rolls are from Beloit Iron Works. Following the wet end there is a smoothing press. There are sixty 5-foot drier rolls. Gould stock pumps are generally used.

The power plant, which has a capacity of 250,000 pounds per hour, is equipped with one Babcock & Wilcox integral furnace natural gas burning power boiler and separate floor level fire super-heater. Provision is made for switching to oil. The power boiler furnishes about half the total steam, and one-third comes from two B & W recovery boilers. Steam from the power unit is at 400 lbs. 650 degrees F. Steam is withdrawn at 50 lbs. by means of Mason-Neilan diaphragm valve for evaporators and paper driers. Steam supply is completed with a B & W bark burning boiler which furnishes process steam for the digesters. This unit is located adjacent to the pulpwood barkers.

Swenson Evaporator Co. furnished the sextuplet effect vertical film type evaporators. The tops of these units extend above the roof.

The mud filter and causticizing system was installed by The Dorr Co. A rotary lime kiln burns natural gas and oil.

Electrical energy for the mill comes from two 5,000-k.w. 1947 type, three-phase, 60-cycle 3,600 r.p.m. Westinghouse turbo-generators. These have an inlet pressure of 400 lbs. and exhaust pressure of 50 lbs. at 27½. Inlet temperature is at 650 degrees F.

The Multiwall Bag Plant

The multiwall bag plant adjoins and opened directly into the paper machine room. Each of the two floors contain 92,000 square feet. A 10-inch roller conveyor runs the full width of the top floor, extended from within the paper machine room's operating level. The paper rolls, slit to 42 inch size, pass down the conveyor until opposite the bag making unit to be supplied and are then rolled into place behind the machine. A P&H one-ton monorail installation serves each production line, being used to lift and lower the rolls into place. There are six production lines.

Aluminum paint is used on the overhead, and fluorescent lighting is provided. The floors and machinery are painted green. An air venting system can provide the production section with fresh, filtered air at the rate of 6½ times per hour. Air is drawn from above the building.

The immediate installation calls for six

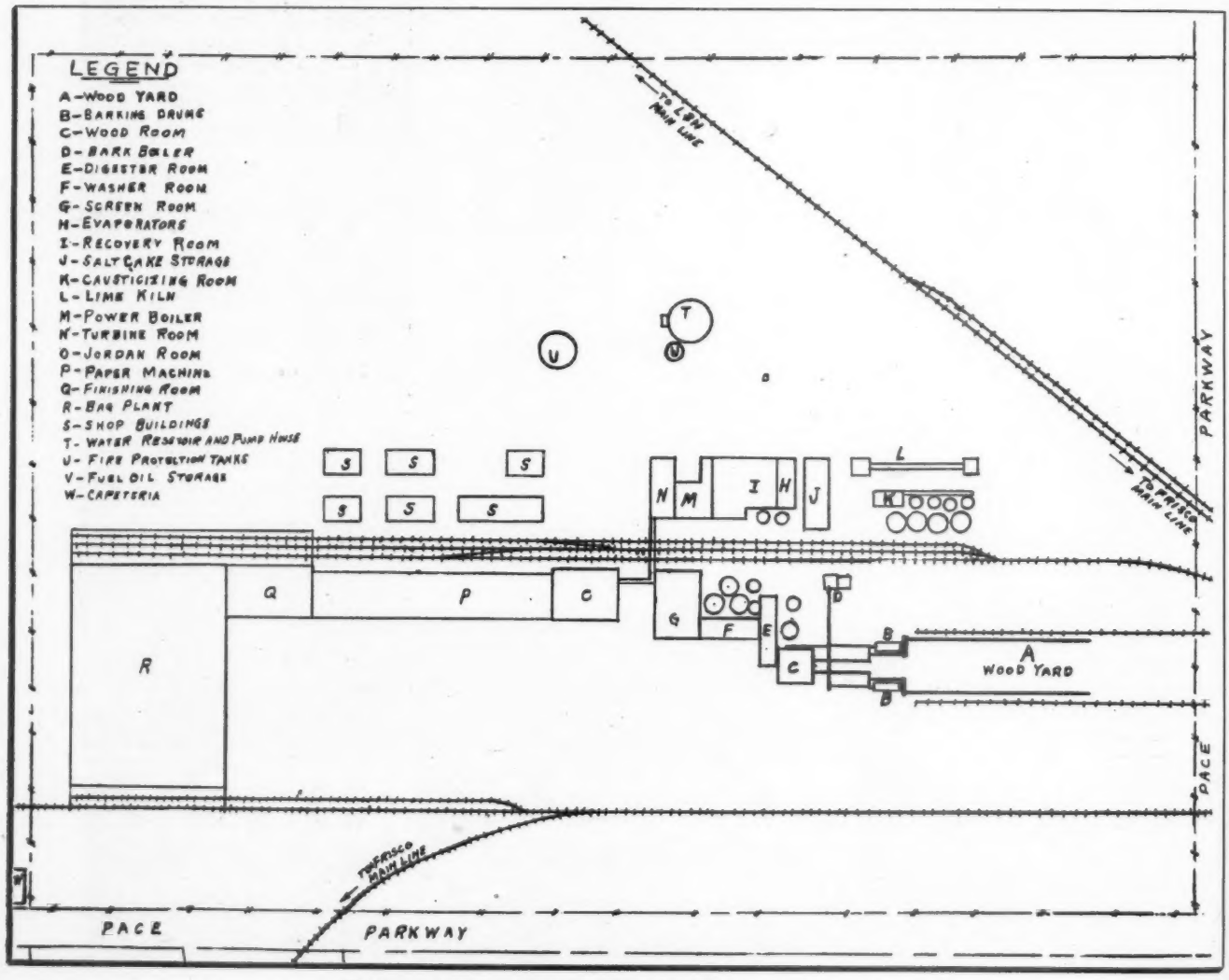

CHART OF THE ALABAMA PULP & PAPER COMPANY MILL
North Pensacola, Florida

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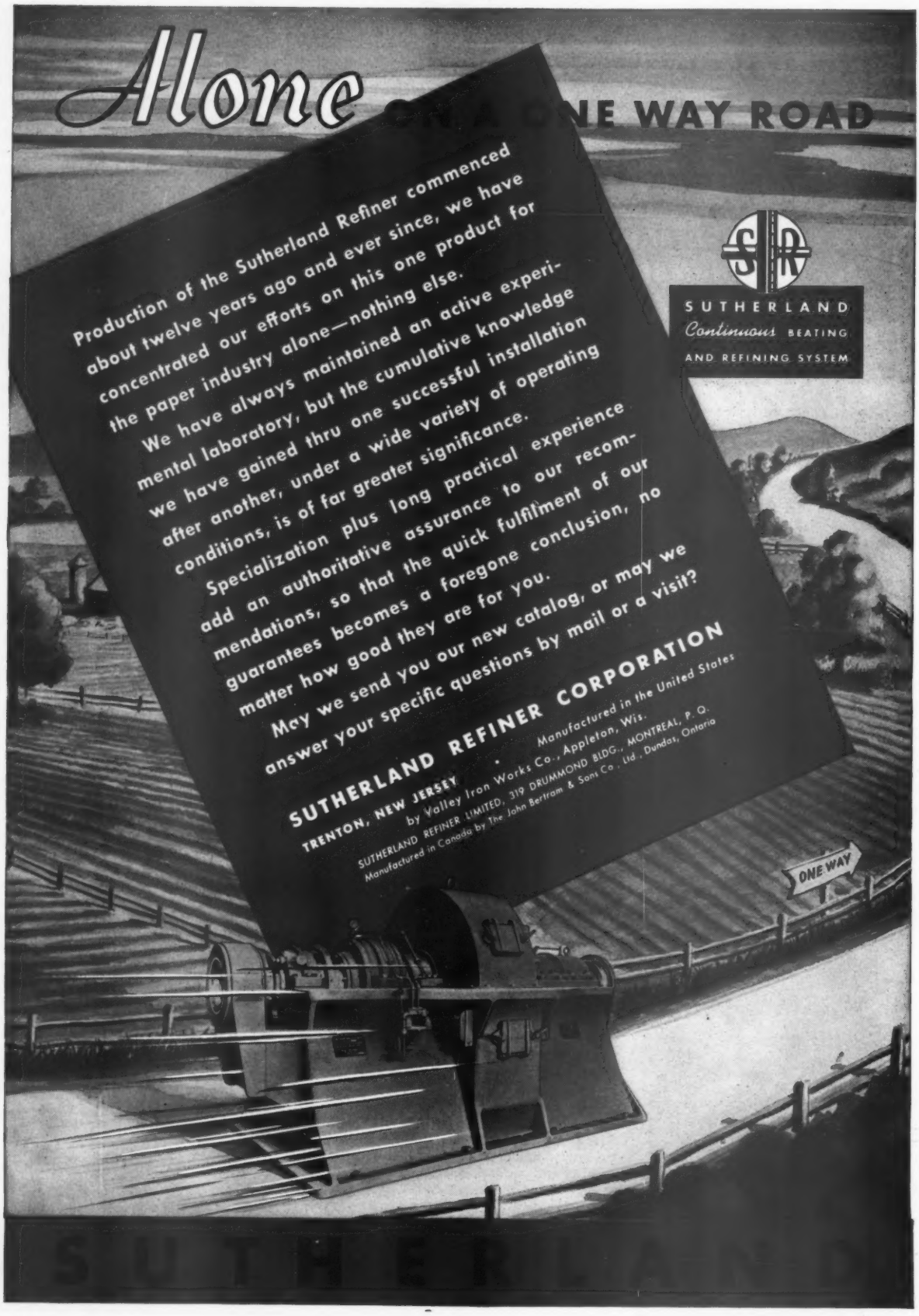
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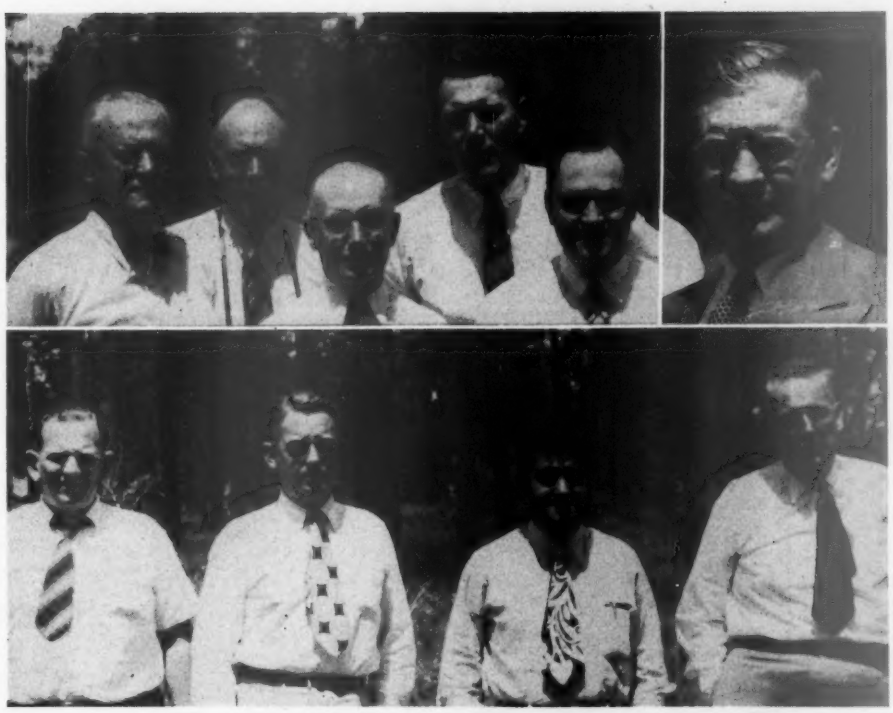
production lines for multiwall bags of which four will be sewn and two pasted. Of the sewnbag units two are St. Regis make and two Potdevin. One sewn bag unit includes one Potdevin tubing machine which has a General Electric motor with Reliance Electric & Mfg. Co. VS control. Behind each sewn tuber machine are five valving machines and five sewing machines. Each machine requires two operators. When sleeving is performed, fourteen added workers are required for the unit. Each unit is assigned a machine operator-adjuster. Finished work is carried to the lower floor by conveyors. Hand valving done now will be replaced in time by an automatic device now in process of being perfected.

Of the two pasting units, one is equipped with a Coty Machine Co. (Watertown, N. Y.) tuber and behind it, two bottomers. The other unit has a Marino Gramegna Milano) tuber.

Each of the sewing units has an electric eye device. The clippings from all units are fed through a trap door into a chute at each machine and conveyed to a baler.

When the finished bags reach the ground floor they are pressed for bundling in Paper Converting Machine Co. units. Food bags are wrapped; others not. Five light trucks are used in the plant. Loading out of finished work is directly into cars spotted alongside the platform. Each of the double tracks can accommodate six cars. The walls on the ground floor are painted yellow.

Equipment installed on the ground floor includes a wax dipping machine



AT KRAFT CENTER, top row, left to right: CARL B. MARTIN, Vice Preident of St. Regis; J. BRYCE EAKIN, Purchasing Agent for St. Regis; GEORGE M. SNYDER, Florida P&P Vice President and Purchasing Agent; W. R. ADAMS, Manager of paper mills, Taggart Corp., Deferiet, N. Y.; R. L. VAYO, Exec. Vice President, St. Regis Sales Corp.; HOMER MARTINDALE, President, Shartle Bros. Div., Black-Clawson Co., who supplied the new machine and other equipment.

Bottom row, left to right: JAMES R. McKEE, Florida P&P Woodlands Dept.; JESSE J. ARMSTRONG, General Manager, Woodlands Div., Union Bag & Paper Corp.; MARCUS RAWLS, Manager, St. Regis' Suwanee Forest; J. L. CAMP, JR., Camp Mfg. Co., Franklin, Va.

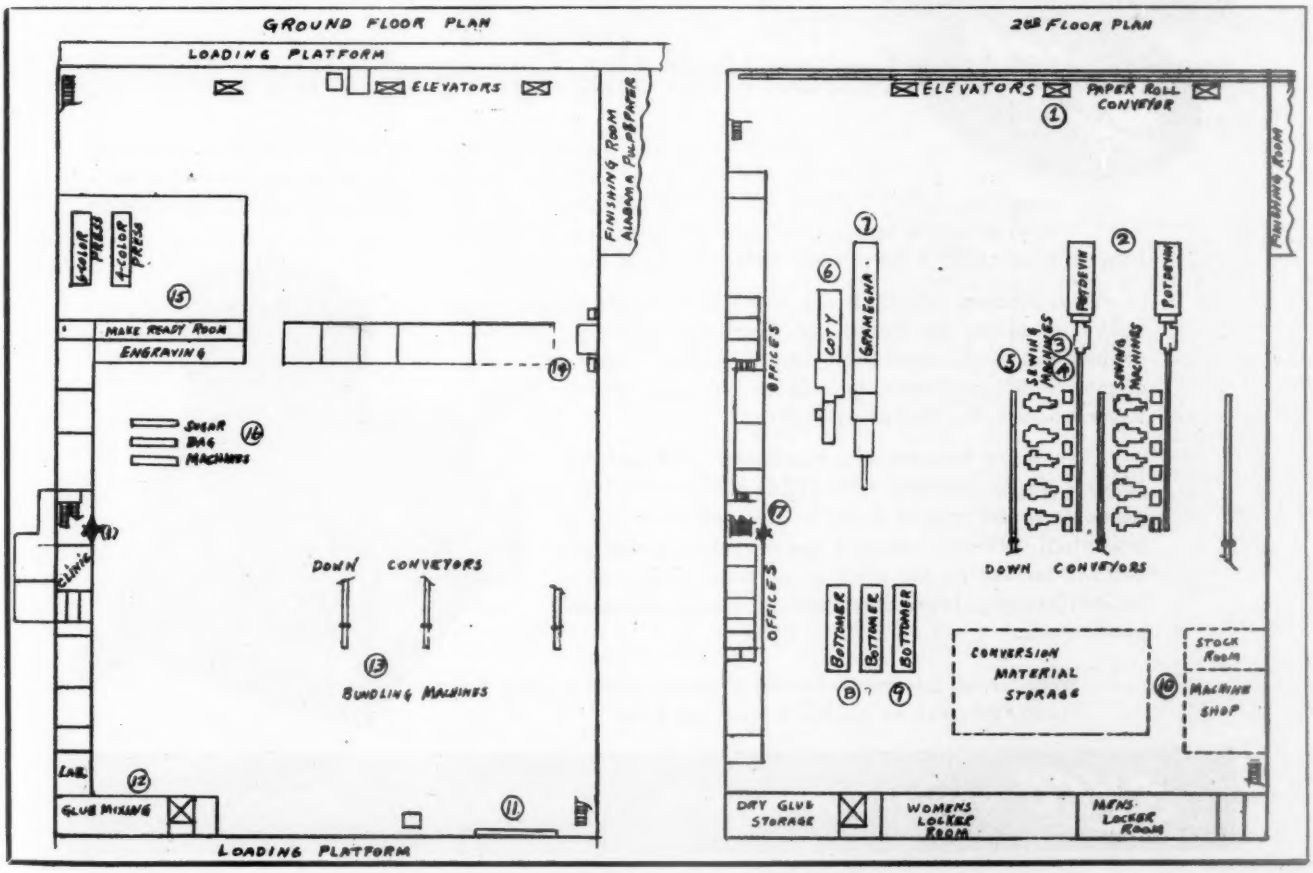


CHART OF THE ST. REGIS MULTIWALL PAPER BAG PLANT

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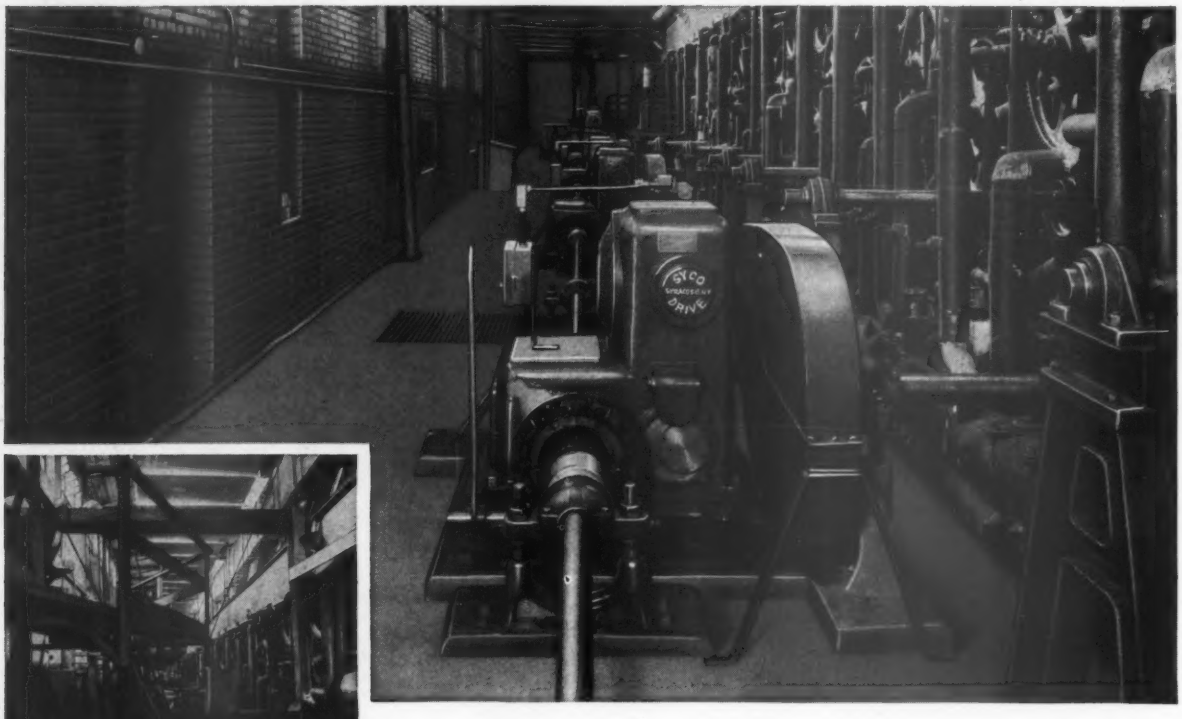

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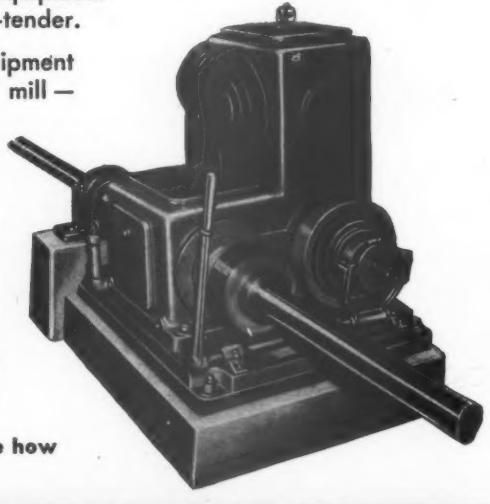

Even more important is the better performance of your paper machine with SYCO Drive. The close, accurate speed control is easily adjusted — holds the individual sections in precise speed ratio — preserves uniform tension on the sheet at all times. This means smooth running, fewer interruptions — and increased production.

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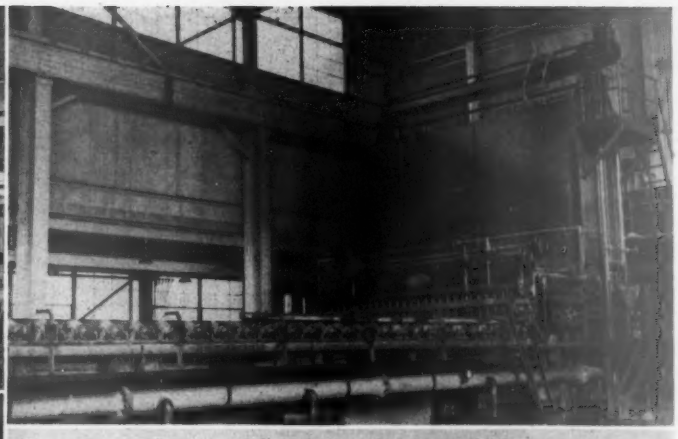
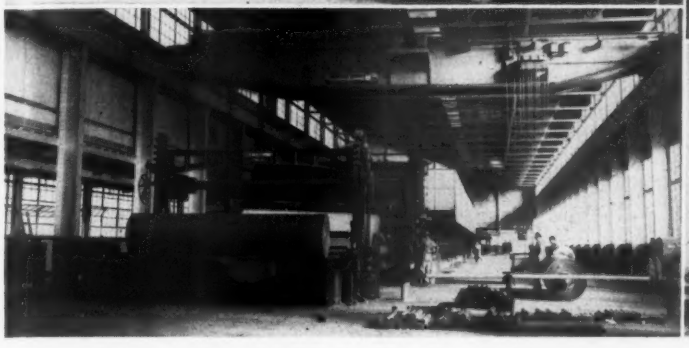
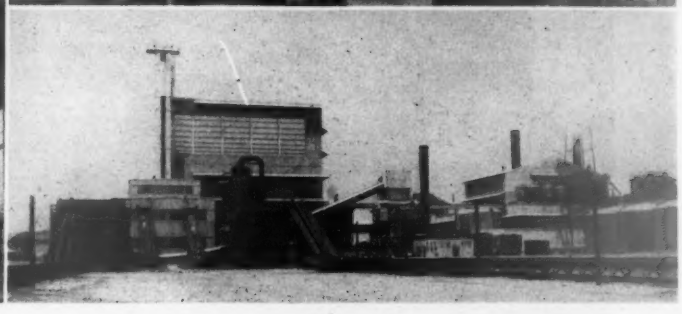






VIEWS AT NEW MILL:

Upper left: Dry end of Black-Clawson paper machine; instruments were furnished by Foxboro. The dryer came from J. O. Ross Engineering. Upper right: Head box for the paper machine came from Valley Iron Works. Fourdrinier is Black-Clawson. Couch and suction press are from Beloit. Non-corrosive material is used where stock touches.

Lower, left: Cameron Machine Co. Type 20 winder and slitter, pneumatically operated with constant tension on the unwind strand. Paper is given a finish in double 8-high calender stacks furnished by Farrel-Birmingham. A semi-Pope reel that follows the calender stacks is a Black-Clawson product. Handling of heavy loads in paper machine room is by a Manning, Maxwell & Moore 30-ton Shaw box crane. Lower right: Pulpwood approaching the mill can be received by a double Jeffrey conveyor installation laid out to permit unloading from rail cars on one side; tracks, on the other.

which seals both ends of bags intended for packing hygroscopic materials; the waste balers; bundling units; glue cookers, small bag making machinery; and, printing presses. The ground floor storage space can accommodate 250 tons of paper (800 rolls of 42-in. width.)

Bags of two plies in the smaller sizes for sales packages for sugar and similar commodities are produced on five automatic machines on the ground floor.

The printing is done on the web and the paper roll rewound prior to delivery to the multiwall bag machines for make-up. The equipment includes four units of the Burroughs 4-color presses designed by Edwin E. Burroughs, chief engineer of the Multiwall Bag Division, and one 6-color press of the design of C. B. Cottrell & Sons Co. The presses were built by the St. Regis Engineering and Machinery Division's plant at Oswego, N. Y. This division builds the bag filling machinery. The color presses are all equipped with Reliance VS electronic control.

The glue room is equipped with three cookers and four agitator storage tanks from which it is pumped directly to the multiwall tubers and sewing machines. Cooking is either direct or indirect, depending upon the product results desired. Capacity is for cooking of 80 bags of glue per day.

TURN TO PAGE 58 FOR MORE PICTURES OF EQUIPMENT IN THE NEW ALABAMA PULP & PAPER CO.

South's Stream Meeting

STATE OFFICIALS TAKE PART

Progress in research on problems of stream improvement now emerging from laboratory to field application was reported at a meeting of southern regional members of the National Council for Stream Improvement, Inc., held at Edgewater Gulf Hotel, Miss., on May 28.

The session was opened by Major J. H. Friend, of International Paper's Southern Kraft Division, who made a point to welcome officials from some of the Southern states who officially participated in the proceedings for the first time.

Early research work to produce "background" was sketched by Russell L. Winget, of National Council, who stated the work is now far enough along to convert the organization to a "service" basis.

W. A. Maggio, in charge of research at Louisiana State University, referred to studies made at Southland Paper Mills (Lufkin, Texas) where favorable results have come from impounding.

Discussion evolved around the pH factor, removal being effected at around 7 to 9, but when it rises to 10 a baffling action develops. Good results from use of potassium nitrate were reported. Dr. Harry Gehm of the council reported that studies proved a condition not injurious to fish would also clear fish food life. Various directions of studies and possibilities were discussed freely.

Those attending the meeting were guests of International Paper Company at luncheon.

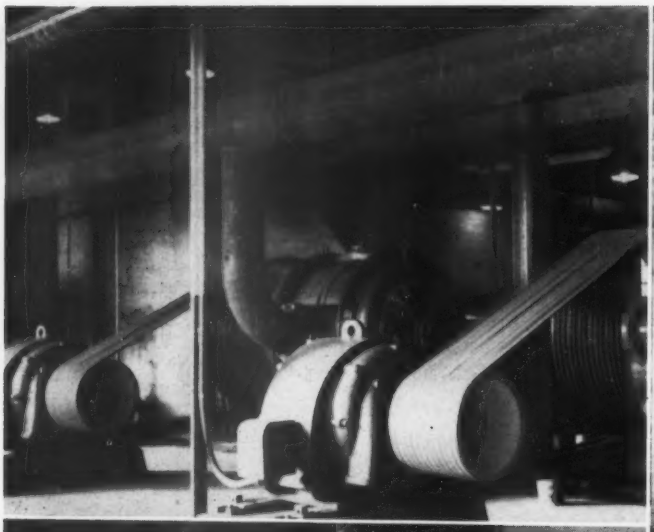
Attendance

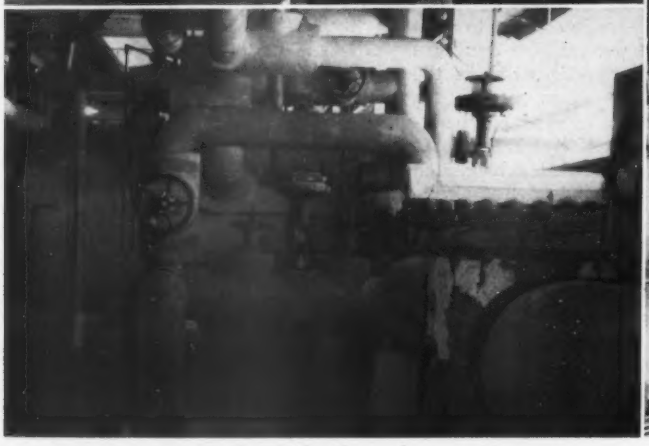
Those attending the meeting included: J. H. Friend, A. W. Pesch, J. W. Lillit, H. D. Shope, and Ion Walker. all of International Paper (Southern Kraft Div.); G. E. Scofield, of Rayonier, Fernandina, Fla.; J. W. Martin, Jr., H. H. Yoder and Robert R. Fuller, of Gulf States Paper Corp., Tuscaloosa, Ala.; Albert Ernest, representing Florida Pulp and Paper and Alabama Pulp & Paper companies: S. L. Swasey, Champion Paper & Fibre Co., Pasadena, Tex.

C. C. Porter. Southland Paper Mills, Lufkin, Tex.; J. E. Sapp, Gaylord Container Corp., Bogalusa, La.; M. L. Taylor, Union Bag & Paper Co., Savannah.: G. M. Dickinson, Sonoco Products Co., Hartsville, S. C.; A. R. Carrick and Malcolm Pineo, Brunswick Pulp & Paper Co., Brunswick, Ga.

R. H. Stevens, National Container Corp., Jacksonville, Fla.: W. P. Newman, Jr., Southern Advance Bag & Paper Co., Hodge, La.; George Cook, National Gypsum Co., Mobile. Ala.; Robert B. Reynolds, Hollingsworth & Whitney, Mobile, Ala.

Russell L. Winget and Harry Gehm, National Council for Stream Improvements; W. A. Maggio, Louis H. Bartlett and Arthur R. Colmer, Louisiana State University, Baton Rouge, La.; John G. Patterson, Sanitary Engineer for Florida; J. H. Sorrels, Texas A. & M. College, College Station, Texas: George F. Carmichael and H. A. Crouze, Mississippi State Board of Health; J. C. Clarke, Alabama Water Improvement Commission; A. J. Harris, Alabama Conservation Dept.; Bert E. Shoulds, Mobile, Ala.; and, F. J. Coogan, technical adviser to Louisiana Stream Control Commission.





EQUIPMENT AT ALABAMA PULP & PAPER. Upper, left: Two Nash L-10's vacuum pumps serve the couch and suction rolls. They are driven by Westinghouse 250-HP. induction motors. Upper, right: The three-stage IMPCO closed counter current brown stock washer is preceded in operation by the IMPCO deknotter, which shows here beneath the J. O. Ross Engineering vapor hood This is first IMPCO deknotter operating in the South.

Middle, left: Swenson Evaporator Co. sextuplet effect vertical film type evaporator installation. At right of picture are condensate units. Middle, right: Instruments for the wash room were by The Bristol Co. of Waterbury, Conn., one of four panels is shown here close up.

Lower, left: Mason-Neilan diaphragm control valve takes 50-lb. extraction steam (right of picture) from higher pressure line. De-aerating feed water heater in background came from Elliott Co. (Jeannette, Pa.) Lower, right: Dorr Co.'s mud filter and causticizing installation taken from evaporator platform.

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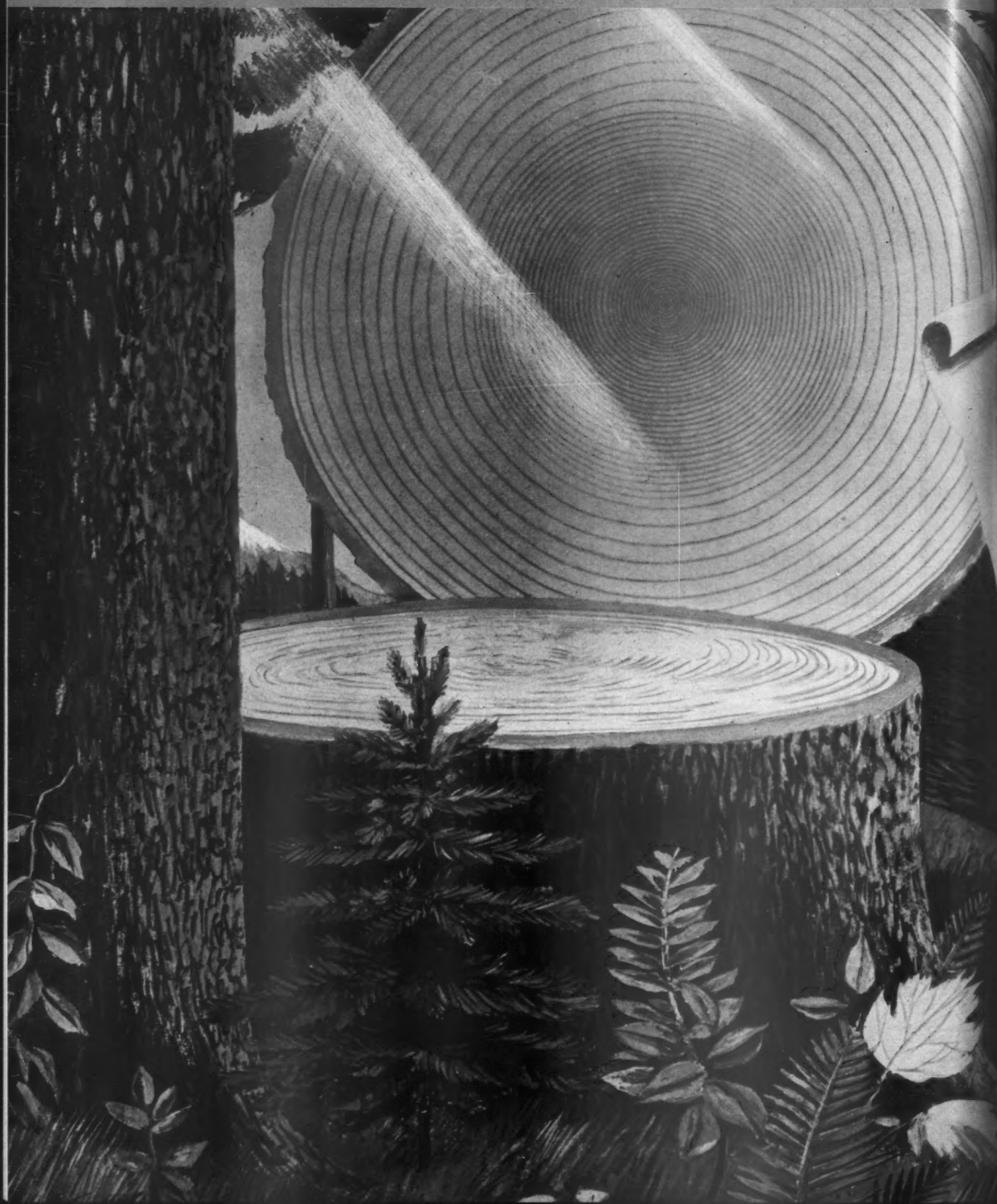

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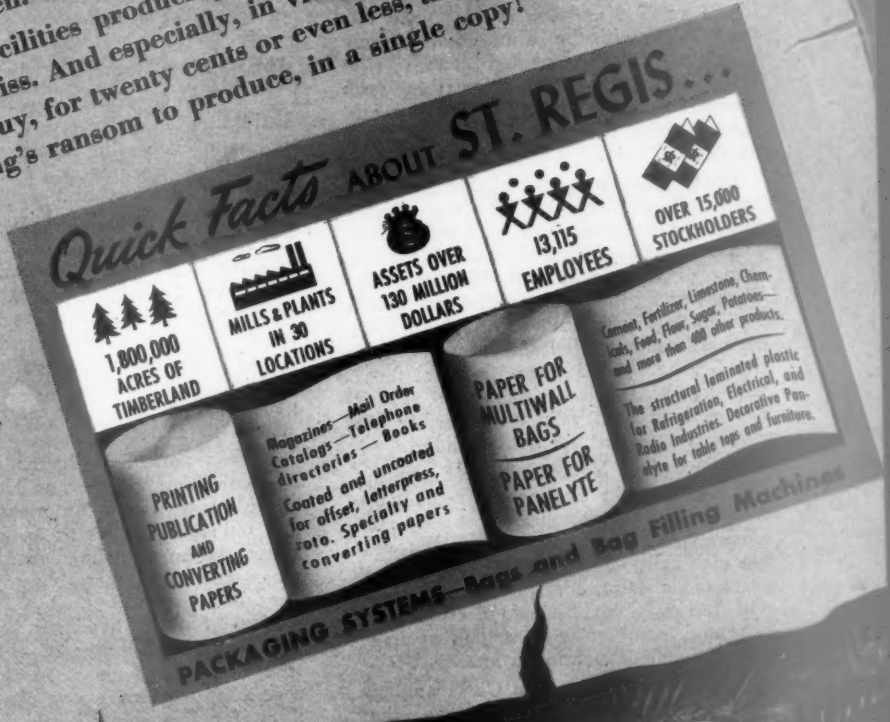
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HIGH POINT OF GEARHART, ORE., Joint TAPPI-Supts. Meeting came when the winner of Shibley Award was announced. This award dates back to 1939 and goes to young Pacific Coast mill employe adjudged to have produced and presented the best original paper of year in technical field.

DR. CHARLES ROLAND McCULLY, 34-year old Research Chemist, Weyerhaeuser Timber Co., Longview, Wash., won with his paper "Determination of Metals in Pulp by Use of the Dropping Mercury Electrode" (published in Apr. 1948 PULP & PAPER, Page 45).

Dr. McCully is shown at left, receiving award from PRESIDENT WILBUR F. GILLESPIE of TAPPI. WILLIAM R. BARBER (left), former Vice President of TAPPI, looks on happily, for more than any other individual he has been responsible for stirring up interest in the annual contest among young Coast mill employes.

At right are contestants and their wives—in the usual order: TOM W. NICHOLSON of Woodfiber Division, Simpson Logging Co.; Mrs. (Irene) Nicholson; Mrs. ("Babs") McCully; DR. McCULLY; Mrs. (Frances) Caskey, and FRANK CASKEY, Crown Zellerbach Corp., Camas, Wash. ROBERT V. PAZINA, Fir-Tex Insulation Board Co., the fourth contestant, was unable to attend.

Record Coast Meeting

McCULLY WINS '48 SHIBLEY AWARD

The biggest regional meeting ever held in the West and probably one of the very largest on record for this industry led over 460 men and women to the end of the Lewis and Clark trail, where the pounding surf of the Pacific halted those explorers on an Oregon beach.

This was the third successive year that the Coast Superintendents and Coast TAPPI went to the colorful seaside resort of Gearhart, Ore., for their annual Spring get-together. Attendance records of 350 in 1946 and 315 in 1947 went out the window with the balmy ocean breezes which unfailingly greeted each of the three meetings. The skies this year seemed to clear up especially for the meeting, as it was preceded and followed by days of rain.

Three years in a row, at this one spot, with golf, clam-digging, chinook salmon dinners dances, etc., as well as serious business and technical sessions, made many of those who attended feel they were coming back to a kind of family reunion. It was obvious that a thread of sentimentality had been woven into the Gearhart meetings and a lot of those who attended will be sorry that it will not be held next year, and possibly not again at Gearhart for a long time.

Next year a National TAPPI meeting will be held in Portland, Ore., in the early part of September. Most Superintendents Association members in the west are also members of TAPPI and, if past practice is followed, that means there will be no Joint Spring Meeting next year and members will pitch in to make the National convention a success.

Carrying the Lewis and Clark analogy a bit farther, it may be recalled that President Jefferson sent that intrepid pair on the journey which ended on the Gearhart beaches over 140 years ago in order "to explore the Louisiana Purchase." The principal honored guests at Gearhart last month were a pair of real Louisianians—President Wilbur F. Gillespie of TAPPI and his wife, from Bogalusa, La., where he is technical director of Gaylord Container Corp. This popular couple did one of the most effective jobs of representing a national organization ever done at a western meeting, according to several experienced observers.

The Shibley Award

The Gearhart convention wasted little time in getting down to its most dramatic event—the award of the Shibley prize to a young mill employe for the most outstanding and original TAPPI paper presented at Coast meetings during the past year.

William R. Barber, technical director of Crown Zellerbach Corp., and former vice president of TAPPI, who probably more than any other individual has inspired young mill employes to participate in the contest and in TAPPI affairs in general, told how the competition was started in 1939.

It was named in honor of the late Kenneth "Cap" Shibley, of Seattle, known throughout North American technical and industrial circles as an authority on water treatment, who died May 1, 1937, when still a comparatively young man himself.

"Cap" Shibley lived his belief that it was the responsibility of older men to train the younger men in this industry and to give them every opportunity to think for themselves," said Mr. Barber. It would be no exaggeration to report that as Mr. Barber said these words, many in the audience were undoubtedly thinking that they applied as much to him as to the man of whom he spoke.

Mr. Gillespie then made the presentation, which had been a closely guarded secret of the judges, acclaiming Dr. Charles Roland McCully, 34-year old research chemist with Weyerhaeuser Timber Co., Longview, Wash., a native of Halsey, Ore., as the 1948 winner. Dr. McCully had developed a method of determining metals in pulp by using the electrolysis of solutions, using a pinhead of mercury on the end of a cathode as one electrode and a pool of mercury of much larger area as another. He presented it at a TAPPI meeting in Tacoma, Wash. last March as a more rapid and accurate method than wet and dry ash procedures.

Mr. Gillespie pointed out that the $50 that goes with the award is of minor importance, but he warned contestants, all of whom were given books as prizes, not to rest on their laurels.

The Contestants and Judges

Shibley Contest Papers and when they were published:

"Insulating Board Hand Sheets" by Robert V. Pazina, Fir-Tex Insulating Board Co., St. Helens, Oregon, page 70, Nov., 1947, PULP & PAPER.

"Effect of Beating Tackle on Development of Pulp Strength" by Frank E. Caskey, Crown Zellerbach Corp., Camas, Wash., page 66, Dec. 1947 PULP & PAPER.

"Determination of Metals in Pulp by Use of Dropping Mercury Electrode" by C. R. McCully, Weyerhaeuser Timber Co., Longview, Wash., page 45, April 1947 PULP & PAPER.

"Statistical Quality Control Applied to Insulating Board" by T. W. Nicholson, Simpson Logging Co., Shelton, Wash., page 66, May 1947 PULP & PAPER.

These papers were presented at the four Pacific Coast TAPPI semi-monthly meetings

of the 1947-1948 season. They are judged on the basis of original thinking, organization, composition and presentation.

The board of judges for the 1947-1948 contest were: Harold Wall, Longview Fibre Co., chairman; W. R. Barber, Crown Zellerbach Corp.; Gray King, Rayonier; Dick Hammond, Weyerhaeuser Tbr. Co.; Eric Ericsson, Puget Sound Pulp & Timber Co.; Erwin Thieme, Soundview Pulp Co.; Fred Welleber, Hawley Pulp & Paper Co., and Robert M. True, General Dyestuff Corp.

TAPPI Plans Discussed

Mr. Gillespie then reviewed TAPPI affairs and said TAPPI's own new scientific magazine will first see the light of day in Jan. 1949, with a "dummy" already sent to printers in the east for bids. A New York - New England - Delaware Valley committee will launch the magazine, he said.

Dr. Ward D. Harrison, assistant to the general manager of Riegel Paper Corp., is preparing a TAPPI book on bleaching as head of the pulp purification committee, said Mr. Gillespie. He then told of plans for these TAPPI fall meetings:

Plastics Division Meeting (with resin fiber bonding as one session's subject) at the Institute of Paper Chemistry, Appleton, Wis., on Aug. 16-17.

The Engineering Conference at Buffalo, N. Y., sponsored by Westinghouse on Oct. 25-28.

The Mechanical Pulping Conference at Poland Springs, Me., a joint affair with the Canadian Technical Section on Oct. 11-13.

Fundamental Research Meeting at Madison, Wis., Aug. 18-20, on "Physical Constituents," last of a series of three such meetings.

Testing Division Meeting at Mellon Institute, Pittsburgh, Pa., Oct. 11-13.

Fibrous Residues Division Meeting at Peoria, Ill., with date to be set.

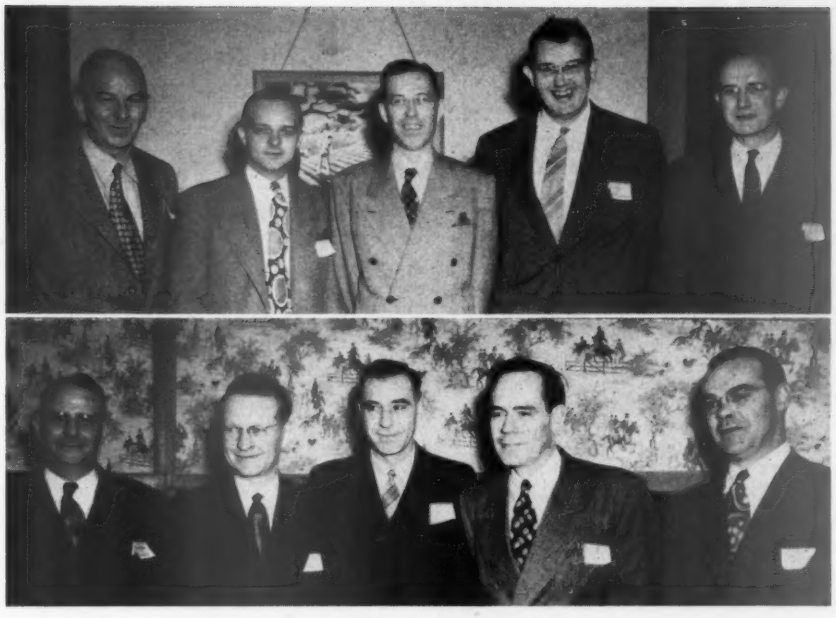
The Alkaline Pulping and Chemical By-Products Divisions will hold no meeting this fall, but will prepare a complete session for the National meeting in Portland, Ore., in September, 1949.

Kenneth P. Geohegan, vice president of Howard Paper Mills, Inc., Dayton, O., who said he was on his "first trip west of Iowa" told of the work of the TAPPI local sections committee which he heads. He said the type of TAPPI meetings held on the Pacific Coast "represent an ideal which the other sections should approach as rapidly as possible."

He said the annual February convention in New York has more papers offered to it than can be effectively presented at that time and, in the future, many of these papers will have to be presented at local sections.

Two TAPPI national committeemen, Harold Bialkowsky, associate research director of Weyerhaeuser's Pulp Division, Longview, Wash., and James D'Arcy Clark, consultant of Longview and Chicago, Ill., were introduced.

Charles Ackley, Port Angeles, Wash., division of Crown Zellerbach Corp., was called on to speak for the Superintendents Association, of which he is fourth vice president, and he called attention to plans for a National Superintendents Convention on the Pacific Coast in 1951—the year he is slated to be president. He said the association now has 1,356 members and recalled its founding in 1918 by Fred Boyce and others and the founding of the Pacific Coast division in Seattle in 1933.



TOP ROW—NEW COAST TAPPI OFFICERS ELECTED at Gearhart (left to right): Robert M. True (General Dyestuff Corp.) Secy-Treasurer; Ben E. Natwick (Appleton Wire Wks), Executive Committeeman; Harold C. Wall (Longview Fibre Co.), Chairman; Joseph L. McCarthy (Univ. of Washington), Executive Committeeman and retiring Chairman; and Walter F. Holzer (Crown Zellerbach Corp.), Vice Chairman and Program Chairman for 1948-49.

Below are men who headed Superintendents Division at Gearhart (l. to r.): Charles Ackley (Crown Z), Fourth National Vice Pres. of Supts.; H. Radford Russell (Everett Pulp & Paper Co.), First Vice Chairman of Coast Division; L. D. McGlothlin (Crown Z), Second Vice Chairman; Gerald F. Alcorn (Weyerhaeuser Tbr. Co.), in his second year as Coast Chairman, and Albert S. Quinn (Stebbins), Acting Sec'y-Treas.

In a brief meeting before this session, the Pacific Coast TAPPI section, the oldest section of that organization (organized in Seattle June 22, 1929, with C.R.P. Cash, now general superintendent, pulp div., Brown Co., Berlin, N. H., as first chairman), elected new officers. Harold Wall, Longview Fibre Co., was elected chairman; Walter F. Holzer, Crown Zellerbach, Camas, vice chairman, and Robert M. True, General Dyestuff Corp., Portland, Ore., secretary-treasurer; and Ben Natwick, Appleton Wire Works, Camas, and Joseph L. McCarthy, retiring chairman, were elected with the three officers to the executive committee.

Future of Wood Supply

Col. W. B. Greeley, former U. S. Chief Forester and now director of American Forest Products Industries, Inc., Washington, D. C., an educational association sponsored by pulp and lumber industries, was the Friday luncheon speaker.

"Our future wood supply is going to be what we make it," he said. "Re-logging can add a million to a million and a half cords to the Pacific Coast wood supply and intensive forestry can add 5 million cords in the fir region and up to 2½ to 3 cords more per acre in the fast growing coastal hemlock belt.

"The law of supply and demand is turning the Pacific Northwest back to the growing power of its soil; in Washington and Oregon are 26 million acres of the most productive forest land anywhere in the world," he said. "We haven't yet learned what this land can do."

The Pacific Northwest is 20 years behind the Pine Belt of the South in forestry, said Mr. Greeley. The 8½ million cords consumed in the South annually comes entirely from second, third and fourth cuttings, he explained. He cited a new pulp mill being projected in the South which started its forest nursery even before the mill was started.

"The South is producing more wood today than it ever did in the lush days of virgin timber stands because the pulp industry moved into the South with billions of dollars of capitalization and a forestry program," he said.

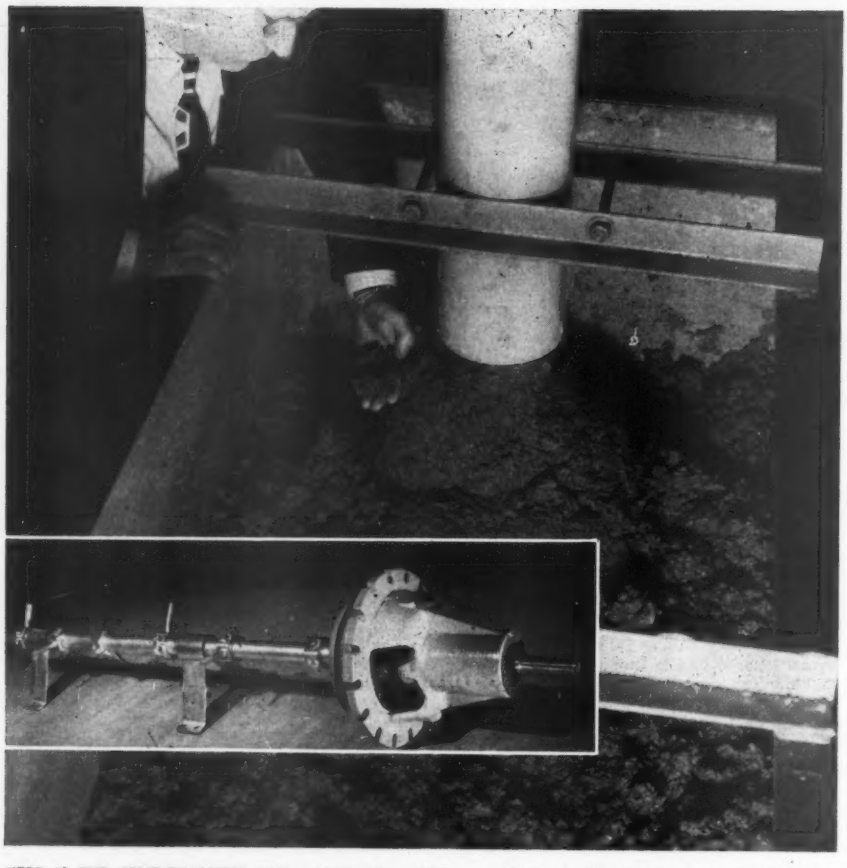
Progress Report on Madison Lab

At a joint session presided over by Gerald F. Alcorn, sulfate superintendent, Weyerhaeuser Timber Co., Longview, and chairman of the Coast Superintendents, progress report was made by Dr. John N. McGovern, of the Pulp and Paper Division, U. S. Forest Products Laboratory, Madison, Wis., on work done there in semi-chemical pulping.

He said one or two mills may use wood left-overs from woodworking plants in the Middle West to make a corrugated board by this process. Another mill, he said, is planning to use Jack pine slab wood to make liner board and boxes with a 70-80% yield sodium sulfite semi-chemical pulping.

In response to questions about the availability of sodium sulfite he said it can easily be made and also that it is a by-product of chemical industries looking for a place to have it used.

Bauer Pulpers are used at Madison in



HERE IS THE ALLIS-CHALMERS Hi-Density Feeder which was shown in Movies at the Gearhart, Ore., convention and described in a talk by H. K. Kingsbury.

The inset shows the assembly of the feeder. The larger picture shows 8% bone dry stock being pumped by the feeder. The feeder is bolted to the bottom of this tank.

the successful demonstration of the products mentioned above. Following is Dr. McGovern's report on the experiments:

Sodium Sulfite Pulping of Douglas Fir

Second-growth Douglas-fir chips available at the Forest Products Laboratory were pulped with a sodium sulfite liquor buffered to near neutrality with sodium bicarbonate. The pulping experiment, which was exploratory in its scope, covered the production of pulps in the yield range of 50 to 85 percent. The pulps thus produced had the following characteristics:

Yield %	*Sod. Sulfite Consumed % Wood*	*Cook Time Hrs.*	*Lignin Content %*	*Burst. Strength Pts/lb.*	*Tear Strength Oms/lb.*
50	35	13.0	7.5	0.6	0.6
70	22	5.0	16.0	1.0	1.2
80	16	2.0	19.0	1.1	1.8
85	13	0.5	21.0	1.25	2.3

A possible use of a high-yield Douglas fir pulp was investigated in a preliminary way by conversion of the pulps made in 70 and 80% yield into liner board for corrugated container board on the laboratory paper machine. The liner made from the 80%-yield only showed properties comparing favorably with commercial liner board.

Building Board Experiments

Coarse-fiber pulps have been made from a number of wood wastes at the U. S. Forest Products Laboratory in Madison, Wis.

Jack pine slabs, Douglas fir veneer and planer mill residues, and hardwood box-plant, furniture-mill and veneer-mill wastes have been softened in chip form with water or steam and fiberized in an attrition mill.

Strength test evaluation indicated many of the pulps could be made into satisfactory roof insulation and interior insulation boards. Insulating boards of good quality were made from fiberized raw and steam-cooked Douglas fir sawmill waste both with and without the addition of red alder semichemical pulp. Work is in progress on studies to improve the quality of coarse-fiber pulps with the idea of increasing the amounts that can be used for such products as roofing felt, chipboard, hardboard, and other paperboards.

New Semi-Chemical Mill Being Built in Green Bay

One of the new types of pulp and paper mills described in this article in the speech by Dr. McGovern is already being built at Green Bay, Wis., according ot recent word from there.

The newly formed Green Bay Paper and Pulp Co., employing the semi-chemical sodium sulfite pulping process demonstrated at the Madison laboratory, is building the mill which will utilize wood left-overs and hardwoods.

George Kress, president of Green Bay Box Co., is also president of the new firm. Estimated cost of the new mill, including land, is $1,150,000.

New Pumping Equipment

A new kind of pump, described as Hi-Density Feeder, which has pumped stock of 10½% consistency—reputedly the highest ever pumped—was then described in a talk and in a movie. H. K. Kingsbury, of Allis-Chalmers Mfg. Co., Milwaukee, Wis., said tests have been made with this feeder (see picture on this page) in the North Carolina Pulp Co., Plymouth, N. C., pumping raw kraft stock of 8% consistency through 250 feet of 6-inch pipe at 1300 gallons per minute.

He said the feeder operates at 1,150 r.p.m., with 22-degree angle six-inch blades and has pumped up to 140 or 150 ft. heads. The feeder has stainless steel parts and plastic bearings.

It has handled cotton linter pulp to a refiner and pulps from Hydrapulpers. He said it may often eliminate the need of making wet lap and will make possible the production of a better paper at less cost.

In the course of relating the history of Allis-Chalmers research, Mr. Kingsbury said:

"It has been known for some time that the particle to particle friction in a pulpy mass can be reduced to a minimum by the admission of vibration. The decreasing of this internal friction allows the force of gravity to act and create flow, even though the mass is absolutely dry, such as sand, cement, etc. With the theory on vibration and movement by screw conveyors, in mind, we started our research work in a Northern Wisconsin paper mill where ample raw sulfite stock was available for experimental work.

"A wood tank was constructed approximately 9 ft. long by 6 ft. wide by 4 ft. deep. A tubular shaft extended through the entire length of this tank and into the pipe opening leading directly to the centrifugal pump inlet. This tubular shaft was driven by belt or direct connection on the end of the tank opposite the end where the centrifugal pump was located. It was supported by a ball thrust bearing on the outside and by two plastic bearings on the inside of the tank. This agitator or feeder shaft had no mechanical connection with the centrifugal pump used in conjunction with it.

"It was first thought that a device similar to an open flight screw conveyor would give the best results, consequently, one inch wide vanes were attached to the tubular shaft and located in a spiral fashion around the shaft.

"Upon test it was impossible to run, except at a very low speed, due to an extreme amount of power being required. For this reason we began removing vanes along the entire length of tubular shaft and found that with fewer vanes and increased speed, an increasingly better operation was obtained. This was especially true when the peripherical speed of the vane tips reached a cavitating condition where an extreme vibration was set up.

"We, therefore, intentionally and yet quite by accident emerged with a machine giving us both vibration and axial pumping, which combination has insured satisfactory operation when pumping up to 8% bone dry consistence sulfite and sulfate stock and 7% groundwood.

"It will be noted that our guarantee is based on a maximum consistence of 7% on groundwood and 8% on the chemical pulps. This is due to the fact, that the vibration which tends to destroy fiber to fiber friction, is more effective on pulps of higher freeness than on pulps of lower freeness."

Finns Cook in Sea Water

A round table discussion group on pulping was conducted by L. D. McGlothlin of Crown Zellerbach, Camas, and E. O. Ericsson of Puget Sound Pulp & Timber Co. One of the topics brought up was cleaning of pulp ahead of the paper machine. Mr. Ericsson said a low dirt content had been achieved in the Bellingham plant through use of Bird Dirtec units. Trials were also made on running tailings stock through the Dirtecs. He said he had been surprised at experimental results obtained on unbleached stock, and men-

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TOP TO BOTTOM in column at left, are: H. K. Kingsbury, of Allis-Chalmers Mfg. Co., Milwaukee, who talked on pumping of high consistence pulp; Dr. John N. McGovern, U. S. Forest Products Laboratory, Madison, Wis., who talked on semi-chemical pulping of red alder and Douglas fir and other less common pulpwoods, and Eric O. Ericsson, Tech. Dir., Puget Sound Pulp & Tbr. Co., who co-chairmanned pulp session with L. D. McGlothlin, Kraft Supt., Crown Z., Camas.

In group at top, right, are (left to right): J. M. Tedford, job analysis specialist for Pacific Coast Association of Pulp & Paper Mfgrs.; Harold Wall, Longview Fibre, who presided at session on labor matters; Gus Ostenson, Crown Zellerbach Corp., who assisted, and the Rev. James A. Fogarty, Univ. of Portland, who discussed Taft-Hartley Law.

Middle group (l. to r.): Ladies who handled registration—Rachel Ellis of Esco, and Irene Lalane and Eva Erickson of Hercules Powder.

Lower group (l. to r.): Papermakers' session—Charles Ackley of Crown Z, who told of trip to East Canada mills; E. G. (Sid) Drew of Drew Engineering Co., Portland, Ore., who discussed uses of low pressure air; P. E. Sullivan of Portland, who discussed uses of Nash vacuum pumps, and Edge Wennberg, Supt., Columbia River Paper Mills, chairman.

tioned that the lower the consistency the better are results.

Two Finnish mill managers attending the session mentioned a few items of interest, including cooking of pulp in sea water.

Heikki Sihtola, of Veitsiluoto Osakeyhtio, Kemi, Finland, asked if any material other than stainless steel could be used for blow pit construction and stand up under the hot waste sulfite liquor. He said his firm is using concrete blow pits. Douglas fir and liner bricks were suggested as suitable materials.

Matti Jalkanen, of Rauma-Raahe Oy., Rauma, Finland, pointed out some of the differences between operations as carried out in America and Finland. He mentioned the shorter cooking cycle used in America, made possible by using higher pressures and stronger acid solutions. The temperatures used seem to be about the same in each country. However, he said longer cooks at lower temperatures result in better yield.

He also brought out the fact that there is less water in the Finnish chips, as the wood, which is small, is cut in the spring and later floated, trucked or shipped by rail to the plant. These pieces are half barked and allowed to dry. All mills in Finland pack chips as a matter of economy, Mr. Jalkanen told the group. He also said that a more bulky pulp is obtained by cooking with sea water, which is used there.

Papermakers' Session

Meanwhile, the papermakers were holding their own session with Edge Wennberg, superintendent at Columbia Rivers Paper Mills, presiding.

Uses of Low Pressure Air

E. G. Drew of Drew Engineering Co., in Portland, Ore., was called upon to discuss "The Use of Low Pressure Air in the Pulp and Paper Industry." In a rather broad way, he classified various types of systems as to their purposes: (a) Basic; (b) economic; (c) safety or health, and (d) convenience. Following are the portions of his talk which seemed of greatest interest to his listeners:

"I have considered as basic those systems without which you can't make paper. Foremost of these is adequate exhaust. Let me illustrate—for every pound of paper that comes off the dryers at the dry end there has been evaporated from one to two and a quarter pounds of water in the dryer section. In the course of an hour this amounts to 6,000 to 14,000 pounds of water for a machine of 70 tons daily production. This would make a sizable quantity if it were liquid but it is not liquid; it is in the vapor state with many times the volume of the liquid; and in all cases except the vacuum dryer, it does not leave the mill as water vapor only but rather as a mixture of water vapor and air, with a volume in the neighborhood of 250 cu. ft. for every pound of water. Thus, our 6,000 to 14,000 pound per hour will occupy 1½ to 3½ million cu. ft. These are the average for normal conditions. In many mills the volume will be less, in some mills it will be greater. Let's just assume that you reduce that volume to 25%. You will still make paper; but not so much, and not so good. Try to make it without any exhaust at all and you won't keep going very long.

"Another use of air almost as basic is adequate supply of the carrying air to the mill. No other practical vehicle than air has yet been found for carrying off this vapor. And it requires air in large volumes. Since the air is going to leave the mill and must therefore enter it why not put it in where it will do the most good? Just ordinary machine room ventilation will utilize the greatest bulk of it. In addition to this a portion of it may be used to keep the dryer canvases dry, another portion to keep the basement fresh, and still another portion to keep the finishing room warm.

"Another basic use is in the calender cooling system. Basic because wherever it is essential to build a good reel it is virtually impossible to do so without a calender cooling system.

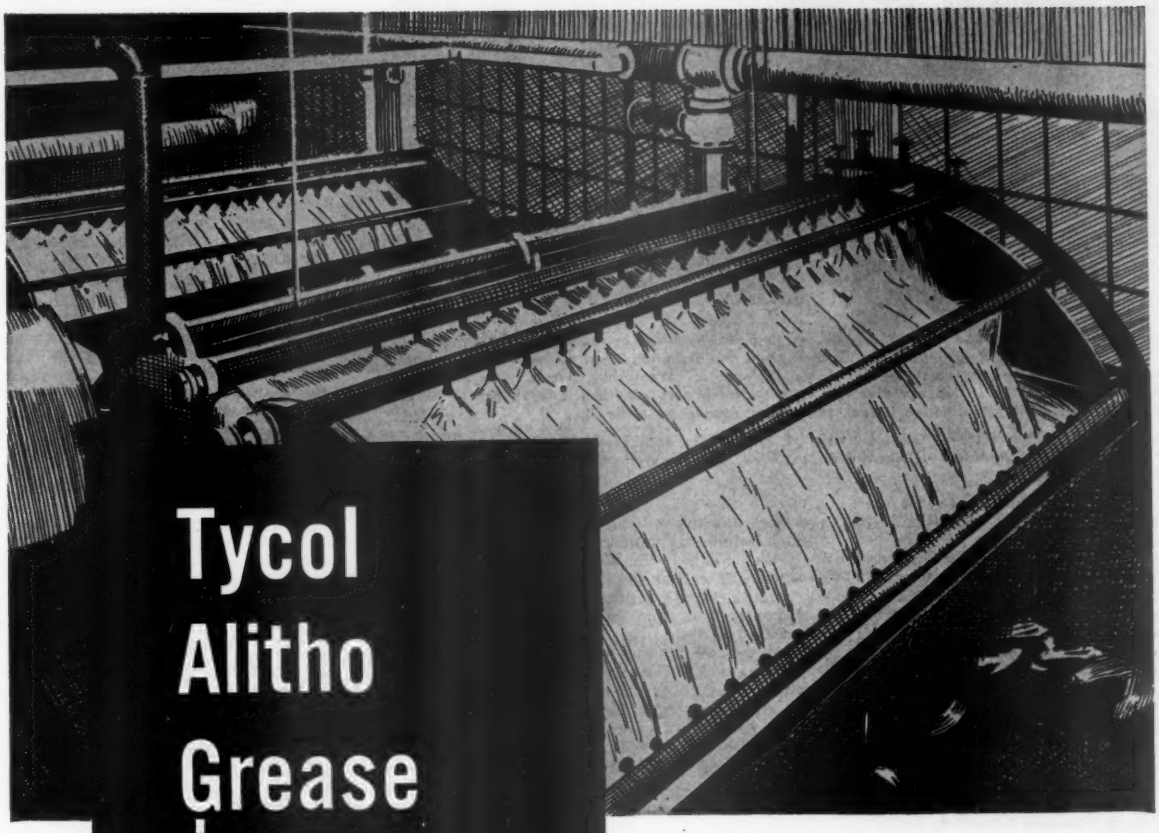
"Those systems which are essentially of an economic nature will enable you to make more paper without increasing the cost per pound, or the same amount of paper at a lesser cost. Such is the time tested vapor absorption system as applied to the usual pulp or board machine. It utilizes a number of 5 to 8-inch diameter pipes extending through the pockets of the machine and equipped with rows of small nozzles that cause jets of hot air to impinge against the sheet across its entire width. This multitude of jets striking the steaming surface wipe off the vapor film and give the water remaining in the sheet a better chance to evaporate. Such installations will improve products and increase the drying capacity 10 to 25%.

"A compromise system that is practical and effective on Fourdrinier machines utilizes one, or at most two, small jets of high velocity air in the ends of the dryer pockets. These jets induce from 10 to 30 times their own volume from the room and create a positive circulation through the pocket. Generally these nozzles are arranged to blow alternatively from the front and rear thus evening up the drying across the sheet. Economic benefits from this system consist of drying increases from 5 to 10 or a reduction in back pressure of from 25 to 50% with the same production rate.

"How often have you seen steam rolling out from under a returning bottom dryer canvas and find on feeling it that it is almost dripping? Such a condition does not help its life, but worse than this, it has an ill effect on the drying. The dryer canvas, in addition to its other functions, is a sort of blotter that absorbs moisture from the sheet as it passes through the machine. If it is still wet when it starts a new pass through it will not absorb to its full capacity. Hot air applied to it on its return can assist drying of paper and improve dryer felt life. Drying capacity has been increased as much as 10%.

"Another use of low pressure air that seems to be getting more and more attention is motor cooling and electrical center ventilation. At times they are basic and at other times economic.

"A paper mill is as varying as a kaleidoscope. A change in process or consumer demand, or the inevitable speed-up, or any of a thousand and one factors will throw an excessive load on a key motor. It may be a big motor or a small one that is built into equipment so that a change would involve much cost and trouble. Often



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TRIO AT LEFT are the winners of men's and ladies' golf, as they looked when awarded prizes. They are Paul Holmes (left), Steam Engineer, St. Regis Paper Co., Tacoma, and Gus Ostenson, Mgr. of Paper Manufacturing, Crown Z, Camas, who tied, and—between them—Mrs. James Rubusch of Wenatchee, Wash., whose husband represents IMPCO in the west. Mrs. Rubusch also was in a tie for honors with Mrs. Erik Ekholm of Bellingham, Wash., but they played it off although it took two extra rounds to settle it.

At right above are Mrs. Wilbur (Estelle) Gillespie, wife of TAPPI's National President, from Bogalusa, La., and Kenneth P. Geohegan, Vice President of Howard Paper Mills, Inc., Dayton, O., and Chairman of the TAPPI Local Sections Committee.

the proper application of cooling air will relieve this situation.

"Again, the modern high speed machine and its auxiliary equipment, with its improvements and refinements, uses huge quantities of electrical energy; and involves transformers, switch gears, M.G. sets, and intricate controls. These are often placed neatly but compactly in a fireproof enclosure and as they are designed to operate in an atmosphere of reasonable temperature, generally 40° C. or 105° F., it becomes necessary to provide goodly quantities of air to dissipate the heat lost from this equipment. These systems are not complicated but should include air filters to exclude gritty dust from contacts, bearings, and commutators; and temperature controls to maintain minimum temperatures. The heat from this equipment is in the form of good clean BTU's which can be dumped into the mill proper during the heating season or exhausted to the outside during the summer time."

In discussing systems installed for health or safety, Mr. Drew said: "Bleach plants are suspectible to atmospheric contamination by chlorine fumes; and to correct this, exhaust systems are applied to the bleach cells and to certain of the washer hoods. I believe I can say, with little criticism, that Transite pipe has proven the most satisfactory material from which to construct the ducts in bleach cell exhaust systems. We have developed both direct connected and V-belt driven exhauster units; that is, exhaust fans in which all exposed metal parts such as the fan wheel, the bearing and drive housing, and the necessary supports are rubber covered. The fan housing themselves consist of Transite pipe. With this design none of the critical metal working parts are exposed to the corrosive vapors. Hoods for washers have generally been built of a steel framework on the outside with flat asbestos board affixed to the inside.

"Digester operating floors are inclined to be hot and at times pretty well contaminated with sulfite fumes. A simple exhaust system will alleviate this condition.

"Some of the finishing and converting processes in the paper mill give rise to copious quantities of very fine dust. While these dusts are generally of a vegetable fibre type, and not so injurious as those of a mineral nature, they are never the less, unhealthy. In approaching any dust problem it is always desirable to collect the dust as close as possible to its source, and the winders of toilet and towelling machines are places where this has been possible. We installed a suction head practically at the dust source, applied a high degree of suction and picked up most of the dust. These heads have been of the raisable types so that when the operator threads his sheet or sets his slitters the hood is raised out of the way by closing an electric switch or a quick opening valve.

"What to do with dust after it has been collected in a head or hood is another matter that varies depending upon the conditions. In many installations a simple cyclone will do sufficiently well. This is the least expensive method, as a rule; as well as the least efficient from a dust arresting stand point. A permeable medium collector such as American Air Filter Co.'s air mat or the bag type filter will increase cleaning efficiency enough to permit recirculation. In other cases the Rotoclone will be the proper machine. Regarding the dust that are collected I believe it can generally be said that paper dust is so fine and of so small a poundage and value that it is not worth reclaiming. Therefore, a wet type of system discharging to the sewer is the most economical means of getting rid of it automatically."

The following discussion of the application of Nash vacuum pumps on paper machines was presented by P. E. Sullivan, sales engineer for E. A. Finkbeiner, Portland, Ore., manufacturers' representatives, and he asked that in this published report we express for him his indebtedness to Carlo Vicario and Carleton Clark of New York for much of his material. Following are principal parts of his address:

"The requirements for flat boxes are for relatively large capacity at low vacuum. The amount of vacuum carried on suction boxes varies widely. Many factors such as the speed of the machine, production rate, product, design of the boxes, as well as the personal practices of the paper mill operating staff, affect the final decision.

"Sometimes it is as low as 2", but in general might be said to range from 5" to 10" of mercury on an average, although 12" and even 15" of vacuum are sometimes carried on flat boxes, particularly if there is no suction couch on the machine and the flat boxes must therefore do most all of the water removal.

"The loads on the wire, and the friction caused by the moving wire on the stationary boxes is obviously directly proportional to the amount of vacuum carried.

"For this reason it is best not to have the vacuum too high, as it would cause considerable wear on the wire. The lowest vacuum which will still give acceptable water removal should be, and usually is, the rule.

"Vacuum pump application to flat boxes naturally involves the subject of separation of the air and the water, due to the very large amount of water which must be handled, along with the air, and due to the fibers contained in this water.

"The most satisfactory method of handling water from suction boxes serving the Fourdrinier wire or the felts on a paper machine, is by means of barometric separation. This arrangement is not possible, of course, where there is no basement.

"Sometimes it is desirable to maintain a different vacuum on the various boxes. In that case a valve is installed in each riser pipe between the box and the common air header leading to the vacuum pump. By means of this valve a predetermined vacuum can be carried on each box, with the maximum vacuum of the system being held in the main suction line leading to the pump.

"A new type separator has been developed to fill a need in mills where older type paper machines had been speeded up, over the years, and the piping from the boxes had therefore become inadequate to handle the increased water and air load from them.

"In many cases the center to center distance between the boxes was not great enough to permit installation of tees of large enough pipe size to give good separation of air and water at this point, as the flanges of the tees would interfere with one another. This separator overcomes that difficulty and at the point where its increased area permits the air and water mixture to slow down momentarily, they are able to separate from one another.

"So far we have discussed only barometric separation. Another method, and one which permits of many variations, is by the use of separating tanks. In many mills where the headroom from the machine room to the basement is not enough to permit of a barometric leg, or where there is no basement, separating tanks must be used. A typical arrangement could be located either on the machine room floor or in the basement, and in either case requires a separate centrifugal water pump to handle the water. This pump should be vented from the suction inlet, back to the tank to avoid loss of prime, also it should be arranged with the discharge in the top horizontal position, generally considered best for permitting an end suction type of pump to clear itself of air, to best advantage.

"Another important point is the check valve in the centrifugal water pump discharge, which prevents the vacuum pump from sucking air from the atmosphere, during the start-up period.

Suction Couch Rolls

"Another important vacuum pump application is on the suction couch roll. On this application, it is generally considered desirable to carry as much vacuum as possible since tests have shown increased water removal and safer running up to about 22 inches of mercury vacuum.

"With a suction couch, the sheet of paper itself is the only obstacle in the path of the air, and therefore, vacuum requirements vary widely with different papers. Selection of the vacuum pump as to vacuum and capacity usually hinges on the recommendation of the machine builder or roll builder, based on tests and past experience, plus consideration of the wishes of the mill as to products to be made on the machine.

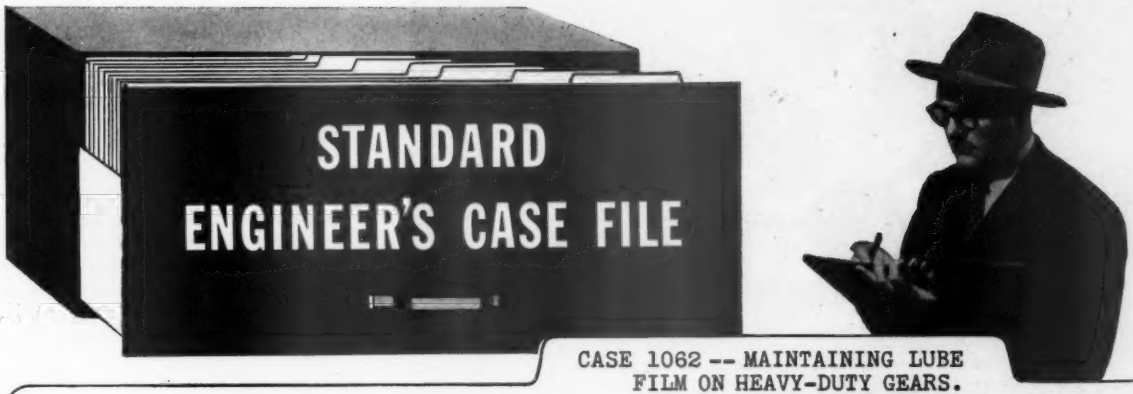
"Involved in all of this, of course, is also a study of the extent of the open area in the suction box of the roll and the application to the figure for this box area, of factors which lead to the final desired c.f.m. capacity for the vacuum pump.

"Separation methods previously outlined could be, and usually should be, applied also to vacuum pumps on suction couch roll service, particularly where the water quantities are apt to exceed the minimum volumes previously mentioned.

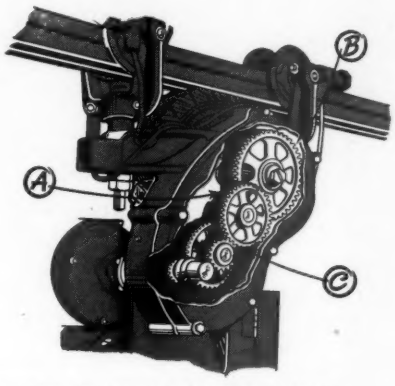
Other Applications

"In a suction press the function of the vacuum is to remove the water which collects in front of the nip due to the pressing action of the top roll. Vacuum usually runs from 18" to 20", although on slower machines 15" vacuum seems sufficient. With the press, the felt and to some extent the top roll, obstruct the flow of air and the sheet itself merely helps to seal the felt over the box. Air requirements for suction presses are, therefore, less dependent on the kind of paper.

"Capacity of vacuum for felt conditioners is usually specified by the manufacturer, depend-



CASE 1062 -- MAINTAINING LUBE FILM ON HEAVY-DUTY GEARS.



HOIST GEAR UNIT FOR OVERHEAD CRANE

Viscous and tacky Calol Vistac Oils stuck tight under extreme pressures on hoist gears. Efficient for all heavy-duty gears, like industrial reduction sets. Come in six grades, 9X (SAE 10) to 45X (SAE 40). Apply by forced-feed or gravity lubricators, bottle- or wick-oilers.

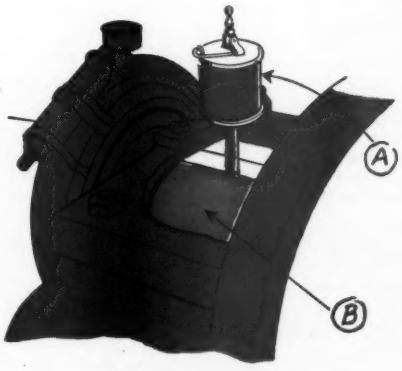
A. Contain oiliness and extreme-pressure compounds. Tough film won't rupture, even on slow-moving gears with extreme pressures on wide area for long time.

B. Economical - little required to provide adequate lubrication and dissipate heat. Resist highest operating temperatures.

C. High affinity for metal maintains lubricating film, reduces power loss and wear.

Calol Vistac Oils also recommended for lubrication of air hammers, rock drills and other air-powered tools ... atomize quickly and stay fluid at low temperatures.

CASE 1063—REDUCING CONSUMPTION OF OIL USED FOR GENERAL INDUSTRIAL LUBRICATION.



STEAM ENGINE MAIN BEARING

In severe lubrication conditions, such as in the main bearing of a steam engine, consumption of compounded Calol Red Engine Oil X was 20 to 30 percent less than that of straight mineral oil. It is recommended for all types of bearings except high-speed, flood lubricated, anti-friction bearings where pickup may be excessive. Comes in three grades: 13X, 16X and 26X.

A. May be applied by all types of oiling systems - compounds promote better circulation in ring-, and chain-oilers.

B. Contains stringiness and oiliness additives. Forms tacky "oilskin" on bearings - resists heavy loads and high temperatures. Reduces friction, high starting torque and wear.

Calol Red Engine Oil X has excellent metal-wetting ability - protects metal against rusting even in high humidity conditions. Cools rapidly.

Trademarks, "Calol," "RPM," Reg. U. S. Pat. Off.

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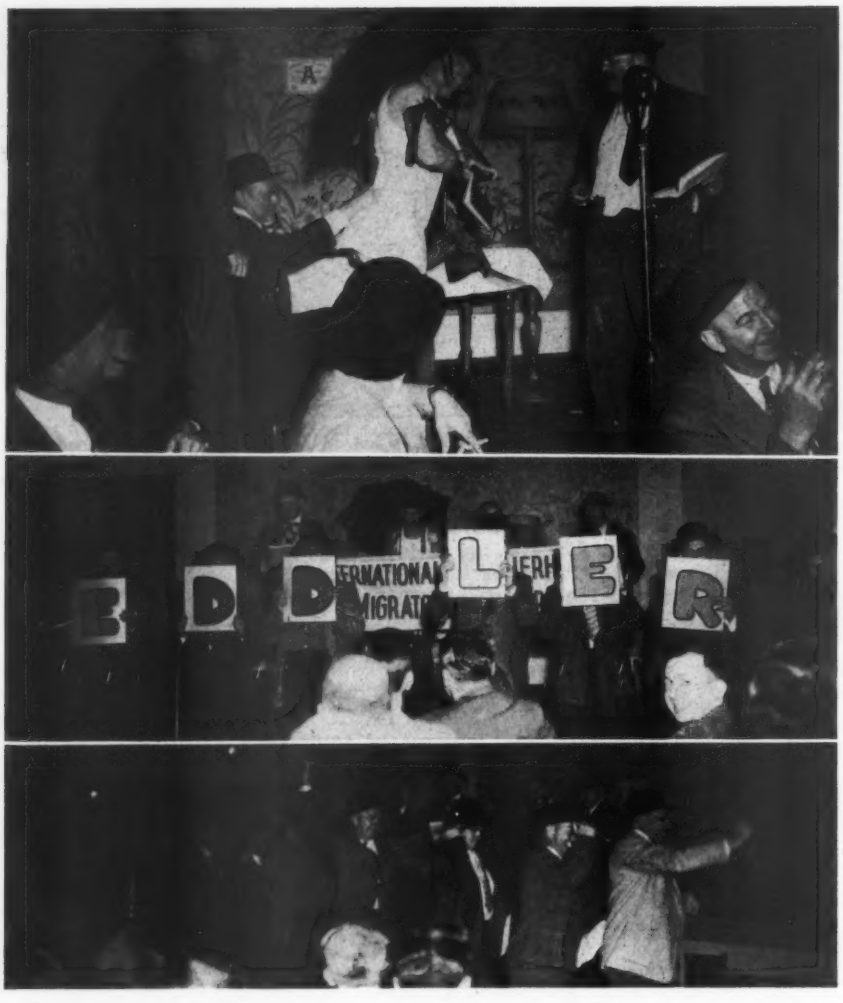
FOR EVERY NEED A STANDARD OF CALIFORNIA JOB-PROVED PRODUCT



ANTON P. (Tony) SIEBERS, Paper Mill Supt., Longview Fibre Co., Longview, Wash., was initiated as honorary member of the International Brotherhood of Migratory Peddlers at the "Wake-'Em-Up Breakfast" at Gearhart. In top picture, Ray Smythe is lacing a corset on Mr. Siebers, after explaining: "This will help you pull yourself together when the convention is over." Zina A. Wise, at microphone, was co-star of the show with Mr. Smythe. Milton Maguire stands at left and in bowler hats, in foreground, are Ernie Kurtz, Ben Natwick and Bob True, all members of the I.B.M.P.

In next picture, members are spelling out "Peddlers" with signs as they sing their song and end show with collegiate-style yell: "L. S. M. F. P.I L. S. M. F. P.I Lousey salesmen; mighty fine peddlers!"

In lower picture our cameraman caught members in act of stabbing each other in the back.

ent on size and number of the shoes and the vacuum usually runs about 5" to 6". Vacuum is sometimes obtained by tapping in on a pump on another application, but due to the low vacuum required that usually involves throttling and waste of power, so most present-day installations include a small separate, low-vacuum pump, for that application.

"To remove entrained air and condensate from paper machine dryer rolls, and thus greatly increase the efficiency and speed of the drying operation and permit drying at as low temperatures as possible, a combination unit consisting of a water pump and a vacuum pump in a single casing is used. In addition, it also involves a tank or receiver, which returns of water and air from the rolls. It is a modification of a vacuum return line heating pump, as used on the heating systems of buildings.

"Water handling capacity required is arrived at by a consideration of the steam load to the dryers per pound of paper, or per day, and vacuum maintained commonly runs on the order of 10" of mercury.

Conclusion

"On existing installations it has been found possible to effect considerable savings in power and also reduce vacuum pump maintenance by installing separation where there previously was none. This is particularly true where the pumps are the older types. Power consumption curves are available showing what the power should be, for any given vacuum, and with a tong ammeter it is a relatively simple matter to spot an offending vacuum pump which is drawing too much power."

Otis-Ackley Tour of Canada Described

Finally, at this papermakers session, Charles Ackley, superintendent at Crown's Port Angeles newsprint mill, told of the recent tour which he and Malcolm Otis, resident manager at Port Angeles, made through ten high speed newsprint mills in Ontario and Quebec. They looked over a grand total of some 40 newsprint machines with speeds over a wide range up to 2,500 ft. per minute.

They were warmly welcomed by the Canadians, Mr. Ackley said, and there was a free and liberal exchange of information across the border among the newsprint makers. Many changes in design are being carried out in these Canadian mills.

One of the interesting developments, Mr. Ackley, said, was the elimination of all passes in some of the headboxes. He saw headboxes with from three passes to no passes at all and the trend seemed to be toward their elimination.

For instance, at the St. Lawrence newsprint mill in Three Rivers, Quebec, he said, there was a flat floor from screen to apron board and they were getting excellent formation. At Canadian International at Gatineau, Quebec, on a 271½-inch wide machine, all passes were eliminated. Perforated plates and rectifiers are used at both of those mills, he said.

Most all the newsprint machines they saw had a ½ inch pitch on the wires and Van der Carr type slices were being used in all but two mills. At one Three Rivers mill, he said, wires were 80 to 85 feet long, with temperature in the headbox maintained at 90 degrees in winter and 110 degrees in summer with .65 to .70 consistency. A lot of work is being done on headboxes and slices.

He reported that production in the groundwood plants is also being speeded up.

Although they did not go to Baie Comeau, they were told that that mill, a subsidiary of the Chicago Tribune, is making a ton of paper per inch of trim.

Migratory Peddlers Program

On Saturday morning was the traditional "Wake-'Em-Up" breakfast of the Pacific Coast meeting with probably the funniest, and at the same time, the most finished show that have yet been given.

Pictures on this page indicate what it was all about—an hilarious initiation of Anton Siebers, paper mill superintendent at Longview Fibre Co., into the International Brotherhood of Migratory Peddlers, as its second honorary member. The first, A. G. Natwick, assistant resident manager at Camas, was initiated at a similar event in 1947.

Ray Smythe and Zina Wise, top officers of the Waiting Room No. 1 (Portland, Ore.) of the order, were principal actors and LeRoy M. Shaneman had a brief moment of thespian glory when he came on stage dressed up as an abandoned "girl friend" of the initiate. Wearing bowler hats, their chosen official headgear, other members of WR 1—John M. Fulton, Dan Keating, Bill Marshall, Ben Natwick, Ernie Kurtz, Milton Maguire, Bob True and Bill Williamson—also participated.

Behind all the ribaldry and kidding was an unspoken tribute to Tony Siebers, as in the case of Buff Natwick, for his many contributions over the years to the success of the serious purposes of the Pacific Coast meetings.

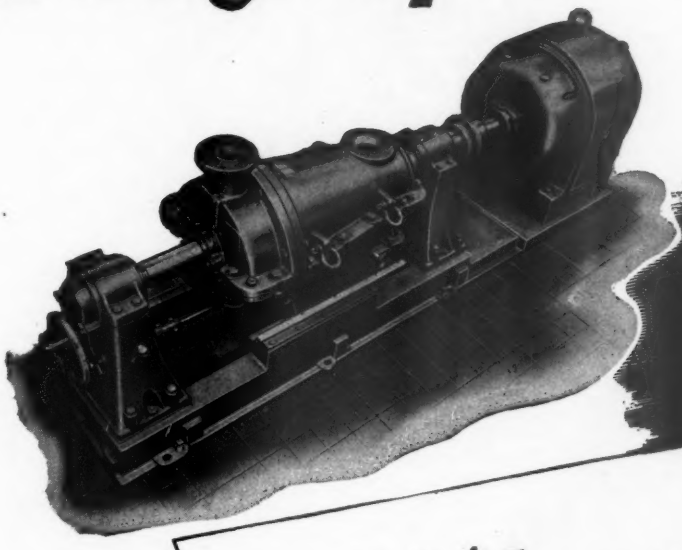
Job Analysis

The final program session was a joint meeting at which intensive consideration was given over to job analysis and an analysis of the Taft-Hartley Law, with Harold C. Wall presiding.

J. M. Tedford, job analyst for the Pacific Coast Association of Pulp and Paper Manufacturers, reviewed work carried on in the pulp and paper field of Pacific Coast during the past 12 years. This pro-

(Continued on Page 73)

a mighty mite for stock preparation



THE JONES *High Speed* REFINER

APPLICATION No. 4:—
In a mill making kraft condenser, the JONES HIGH SPEED REFINER completely eliminates many long hours of beating. By using a cycling arrangement, it produces a better sheet more efficiently.

APPLICATION No. 5:—
In a board mill, the JONES HIGH SPEED REFINER defibres over issue news (replacing a 150 H.P. Refiner). The stock comes slushed from breaker, passing directly into the Jones Refiner which runs at 1200 R.P.M., using 60 H.P., and producing 22 tons per day.

APPLICATION No. 6:—
In another mill, the JONES HIGH SPEED REFINER is used exclusively for clearing flakes from coated book broke (replacing a larger Jordan, 150 H.P. motor) — and operates at 900 R.P.M., using 40 H.P. Volume of stock handled is 2400 lbs. per hour, and more.

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The North Woods mosquitoes in Paul Bunyan's day were really big, rough, and tough. To stop their drilling holes in the copper camp kettle, Paul clinched their snoots inside with a hammer. So the mosquitoes flew off with the kettle.

A reproduction of this incident from the fabulous life of Paul Bunyan—the thirty-first of a series—will be sent on request. It will contain no advertising.

gram started with a year of research and a plan has been developed which has worked quite satisfactorily. Even now this program is improved every year, he said. Of the 3,800 duty combinations listed for the 32 member mills, 2840 jobs have been analyzed to date. He described factors used in making analyses.

Mr. Tedford defined wage structure by comparison with a ladder of wage rates whose bottom step, called "base," represents the wage rate for common labor and ascending steps representing rates for rising skills and responsibilities under varying working conditions. Here base is considered synonymous with a respectable wage, enabling people to live properly.

The aim of this program is to iron out inequalities in the industry's wage system through basic studies of skills, responsibilities, and risk, and application of findings. According to Mr. Tedford:

"Our purpose is to determine from the prevailing wage structure what the variety of conditions in the wage structure are worth, according to factors; and to set up credit tables or establish precedents so that upon meeting similar conditions later, evaluating can be done consistently." It was pointed out that the measuring or evaluating by study of the factors involved is not to measure the individual who performs the work, but to weigh the job itself without regard to the person performing the work.

For new jobs in the industry temporary rates are set up by the wage rate board, from descriptions of the prospective job, and Mr. Tedford analyzes jobs later only after formal request from both management and union is received.

Analysis of Taft-Hartley Law

The Rev. James A. Fogarty, former Notre Dame professor of economics and war labor board hearing officer and now University of Portland professor, did such an interesting job of analyzing the Taft-Hartley law and its predecessor labor laws that his audience was unable to get all their questions before the final luncheon. Father Fogarty was accompanied to Gearhart by his friend, George Charters, assistant resident manager of the Camas mill.

Father Fogarty said the Taft-Hartley law should improve management-labor relations because it "is rewriting the rules so that the umpire can act impartially." Many parts of the law, he explained, are yet to be interpreted in the courts.

For instance, he said the courts are going to have to settle what is "a reasonable offer" to determine if management or labor are bargaining "in good faith." They will have to decide what is an excessive initiation fee in a union, when crafts can break away from unions in organizing, etc.

Until this law was passed, said Father Fogarty, the union leaders were "too much aware of their rights but not of their obligations." Under the National Labor Relations Act, he cited the building up of cases against management as having put management "behind the eight ball" and he depicted that earlier law as "a one-sided law which threw labor at the throats of management."

Under the Taft-Hartley Act, he conceded, "there are some opportunities for a small segment of management to bedevil the unions but as a whole," he predicted, "management and labor will get along."

This new law, he said, sets unions out "so we can see what they are"—their financial structure and leanings; distinguishes between unions and their members and unions and unorganized workers; restores freedom of speech to management; limits the term employer to employers or his paid agents and does not take in chambers of commerce, friends of management, etc.; curtails the power of the unions and their agents, and curtails the right to strike.

The Gearhart convention committee was headed by W. F. Holzer and included as members Ben Natwick, who handled registration and room reservations, Harold Wall, Milton Maguire, J. M. Fulton, Ray Smythe, Jack Wilcox, J. B. Sutherland, Carl Fahlstrom, Gus Ostenson, Zina Wise, Dan Keating, Roy Shaneman, Fred Armbruster and R. M. True.

FIRST FACIAL IN MEXICO
A Transportation "Saga"

The first facial and soft tissue ever made in Latin America is being produced in a new little mill in Mexico, using second hand equipment which was transported by four tractor and trailer combinations all the way from northern New York.

The mill, which just recently started up, can run at most only a few tons a day. At least one of the more modern and bigger mills in Mexico expects to be making facial very soon on a Yankee and the government has indicated it will protect this facial tissue industry with a tariff wall.

The honor of being first in making facial goes to Fabrica de Papeles Faciales y Sanilarios de Mexico, S. A., headed up by Antonio M. Davila, whose plant is about seven miles north of Mexico City on the Laredo highway.

Next door to the new plant is Sr. Davila's unique La Cartonera Industrial, S. A., which is making rough blue paperboard for industrial purposes on a home made machine. There's a groove horizontally across the surface of a forming roll and a worker standing by, touches a knife to the wet board lightly as it revolves until he feels this groove or indentation. Then he swiftly cuts off each sheet along the groove. A home-made press is the next step after which muchachos take the sheets out in a field to dry in the sun.

For several years this has been a profitable business for Sr. Davila and it looks like he is going to make a small success of his facial tissue and soft tissue, too. The products are known as Florida Papel Facial and Florida Papel Sanitaro (toilet) and are being sold all over Latin America. An agent in Colombia wanted to contract for the entire product in that country for a long term.

Louis Goya, a Basque from northern Spain, a c. p. a., who has been in the board industry several years, is general manager. Lawrence J. Socha, machine erector, whose home is Carthage, N. Y., started up the mill. Mr. Socha also started up two other recently imported second hand machines in Mexico City mills, and also started up an air mail paper machine in Peru. For many years he was an erector for Bagley & Sewall. He once managed a mill in Maine, using one of the very machines recently transplanted to Mexico.

The Equipment

It was Sr. Goya who went North to bring the equipment to Mexico after an earlier trip with Mr. Socha to select the items. Piled on four trailers were a 60-in. diameter Rice Barton dryer, a new Bagley & Sewall frame, a Cheney Bigelig mold, a circulating pump from Carthage, a Shartle calender stack from Norfolk, N. Y., an 80-inch Fourdrinier from a New England mill.

THESE MEN PRODUCED FIRST FACIAL TISSUE in Latin America (l. to r.): ANTONIO M. DAVILA, LOUIS GOYA and LAWRENCE J. SOCHA.

Sr. Goya had to drive for the first time in his life in snow—he drove the lead car to the four trailers through a snowstorm in mid-December, 1946, from Watertown, N. Y. to Erie, Pa. But in just two weeks they crossed 11 states and made Laredo, Tex.

Sr. Goya then flew home for Christmas and flew back with four Mexican drivers. After some border red tape and delay they finally got the equipment to the mill site by the end of January.

Although the facial is made very slowly, it is soft and has good Mullen. Swedish aspen soda pulp and waste pond and ledger and news cuttings were used at first but American bleached sulfite was obtained later. Water is re-used in a closed system. An Ames 150 lb. boiler serves the mill.

Senores Davila and Goya are now cooking up plans for a new 112-inch Fourdrinier and 12-ft. dryer to make facial and toilet tissue and possibly carbon copy and they are the kind of fellows who probably will do it.

SUPTS. Meeting in Reading, Pa.

That the American pulp and paper mill superintendent is aware of the threat of U. S. Communism was reflected on May Day when at their Spring Meeting at Reading, Pa., the Pennsylvania-New Jersey-Delaware division of the AP&PMSA held up domestic Reds to the light and had a good look at them.

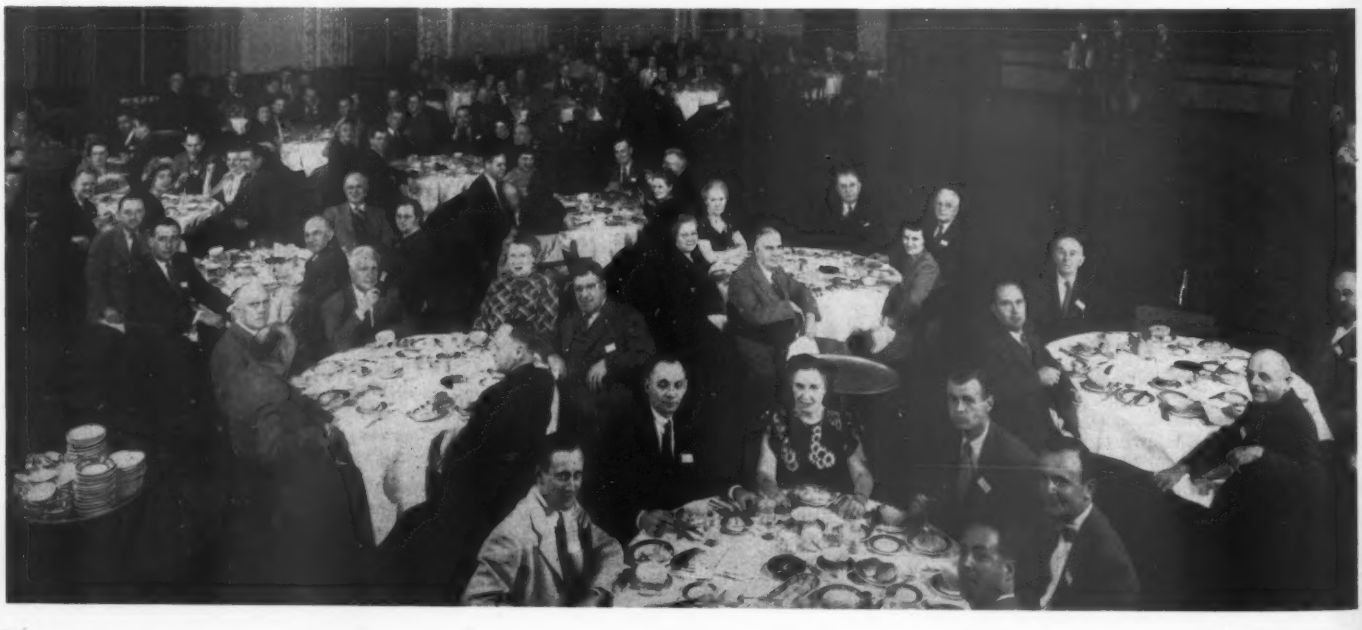
Said Howard Street, National Vulcanized Fiber Co.: "No other subject is as vital to our country as this one." And already James Traill, Jr., W. C. Hamilton & Sons, and general chairman of the group, had said: "There is an overhanging problem affecting the lives of every one of us today. You know I mean Communism."

Speaker on the subject was Arthur T. Paine of the Research Institute of America who backed up his talk with motion pictures—one film Communist-inspired and another called "Cross Roads of America" telling how to combat Communism in industry. Other pulp and paper groups

LOOKING OVER THE PROGRAM for the Spring Meeting of the Pennsylvania-New Jersey-Delaware Superintendents at Reading, Pennsylvania, in the top picture are (l. to r.): James Traill, Jr. (W. C. Hamilton & Sons), Chairman of the Division; Mrs. Traill; Mrs. Alice R. Dow, Secretary-Treasurer; Mrs. Bidwell, and L. H. Bidwell, Jr. (Riegel Paper Corp.), Second Vice Chairman.

Below are Downington Mfg. Co. meeting hosts: Front row—Leon Smith, Harry Merritt, Vice-President in Charge of Engineering; E. Y. Brown III. Back row—J. V. Edge, G. C. Walton, and J. C. Harper.

VIEW OF THE APRIL 30TH DINNER at Reading, Pa., at which the Downingtown Manufacturing Co. was host to the Penn-N. J.-Delaware Superintendents.



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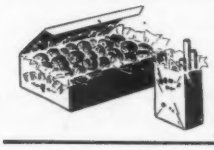
Rayonier's wood cellulose is supplied in several grades to provide the special characteristics required for manufacture of the various types of products in which cellulose is used.

Quality control in production of these high-alpha grades of cellulose assures the constant purity and uniformity required in making viscose and acetate fibers, cellophane, and various cellulose derivatives.

In addition to development of new and improved grades of wood cellulose, one of the principal functions of our research staff is the study of the processing characteristics of our products under conditions similar to those found in our customers' plants.

Principal	Grades of Rayonier Wood Cellulose
	"RAYACETA" is a highly purified wood cellulose specially developed for the production of cellulose acetate fibers. It also is used in the manufacture of acetate films and sheets for packaging purposes.
	"RAYOCORD" wood cellulose is a highly purified product especially suitable for the production of viscose yarns of high tensile strength. It is widely used in the manufacture of tire cords and for textile yarns where maximum strength is desired. It is also a good material for the production of saturating papers and vulcanized fiber.
	"HICOLOR" is an established grade of purified wood cellulose for the production of viscose fibers and yarns of high quality. It is also used as a base material for vulcanized fiber and related products.
	**"RAYAMO"** is a wood cellulose specially developed for the making of cellophane, used increasingly as a protective covering for fruits, vegetables, cigarettes, candy, and numerous other packaged articles.

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interested in this reel should get in touch with the Research Institute at 292 Madison Ave., New York.

About 150 superintendents and allied tradesmen and their wives gathered April 30 at the Abraham Lincoln Hotel to begin the two-day session.

Alice Dow, who now resides in St. Petersburg, Florida, was on hand to handle registration and fulfill her traditional office of secretary-treasurer. After golf at the Reading Country Club, the meeting chairmanned by A. Hartley, NOPCO Chemical, focused on a dinner dance sponsored by Downingtown Manufacturing Co.

The business meeting got under way next day under the chairmanship of Larry H. Bidwell, Jr., Riegel Paper Corp. It featured a motion picture called "High Speed Supercalendering" presented by W. Zonner, Appleton Machine Co.; and a discussion of Schofield equipment by Amos Good, Sandy Hill Iron & Brass Works. After a joint luncheon, the ladies retired for bridge, and the business meeting was resumed in the grand ballroom of the hotel.

Glen T. Renninger, Container Corp. of America, chairmanned this session and introduced John T. Moss, Pusey & Jones Corp., who spoke on "The Vacuum Stream-Flow Cylinder Mold"; and Warren Foster, Simonds Saw & Steel Co., who presented their motion picture "Machine Knives in Industry."

At the wind-up banquet and dance the co-chairmen were Harry Hulmes and Ray Wilcox. Officers of the Penn-N. J.-Delaware group are James Traill, Jr., chairman; Philip Baker, Schmidt and Ault, first vice chairman; L. H. Bidwell, Jr., second vice chairman; Glen T. Renninger, third vice chairman; and Alice R. Dow, secretary-treasurer.

According to Chairman Hartley, the golf winners were—for the superintendents—Albert Hendricks, low gross; Dan Hendricks, low net; and Jack Tourangean, second low net. For the affiliates—Jack De Witt, Jr., low gross; and W. N. Connor, low net.

AS THIS ISSUE went to press the Delaware Valley section of TAPPI was balloting by mail on the following 1948-49 officers: Dr. John Weidner, Container Corp. of America, chairman; Dr. A. S. Erspamer, P. H. Glatfelter Co., first vice chairman; W. P. Dohne, W. C. Hamilton & Sons, second vice chairman; Miss Lois V. Hans, Hercules Powder Co., secretary-treasurer; John Macadam, National Vulcanized Fibre Co.., and Kingdom R. Watt, Curtis Paper Co., executive committee.

Vertrees Young and Ted Tinker Address SPA

Vertrees Young, vice president and general manager of Gaylord Container Corp., told the recent 33rd annual Southern Pine Association meeting in New Orleans that cooperation between paper and lumber manufacturers in the South can assure future wood supply for both.

Ted Tinker, executive secretary of the American Paper & Pulp Association, also was a featured speaker.

SIXTY YEARS IN COAST INDUSTRY

FRANKLIN T. GRIFFITH, who on April 27 reached the 60th anniversary of his active participation in leading pulp and paper and affiliated industries of the Pacific Coast. In 1888 he started working for the California Paper Co. in San Francisco. He is now president and founder of Griffith Rubber Mills and for many years was director in Powell River Co., Hawley Pulp & Paper Co. and Fir-Tex Insulating Board Co.

Sixty years is a long time in the pulp and paper industry in any part of the world. But 60 years in the Pacific Coast industry, which so many look upon as a "young" segment of the industry, is something else again!

Franklin T. Griffith, president of Griffith Rubber Mills and for many years a director of Powell River Co., Hawley Pulp & Paper Co., and Fir-Tex Insulating Board Co., was interviewed in Portland, Ore., on April 27, the 60th anniversary of the day he started working for California Paper Co. in San Francisco. This firm manufactured paper, mostly butcher paper, from straw at Stockton, Calif.

Lincoln Grunett, Pearce Johnson, and Mr. Griffith made up the staff of the San Francisco office. Mr. Griffith, being the junior member, ran all the errands.

Henry Pearce, one of the owners of the California Paper Co., conceived the idea of building a pulp mill in Oregon, and formed the Willamette Pulp and Paper Co. in 1888 and secured a lease of the site at the falls of the Willamette and right to take water from the river for operating grinding machines. In February, 1891, Mr. Griffith moved to Oregon to take over the office management of the new company. Meanwhile, he had been studying law nights and Sundays and in 1894 he was admitted to the bar of Oregon by passing the bar examination. He retired from the paper company and entered practice of law. In 1895 Orestes Pearce, one of the owners, retained Mr. Griffith as legal counsel for the company and that relationship has existed with that company and its subsequent companies, the Crown Willamette and the Crown Zellerbach Corp. ever since.

Mr. Griffith was an early associate of Willard P. Hawley who was employed as superintendent at West Linn, Ore., and who later founded the Hawley Pulp and Paper Co. at Oregon City. Mr. Griffith was a founding director of this company.

Mr. Griffith was a director of Powell River Co. for 25 years, and one of the founding directors of Fir-Tex Insulating Board Co. He was also director of the Hawley company for 40 years. In 1911 he founded the Griffith Rubber Mills of Portland, Ore.

Norman Chandler Becomes President of Hawley

Norman Chandler, publisher of the Los Angeles Times, is the new president of Hawley Pulp & Paper Co., following a recent meeting of the Oregon City company's new board of directors. Mr. Chandler succeeds John H. Smith, for many years associated with the Hawley company in various capacities and well known in the industry.

Mr. Chandler reported the firm will continue to function under the name of Hawley Pulp & Paper Co. for several months until Publishers Paper Co. gets underway. On April 20 the mill converted machines 1 and 3 from specialty to newsprint production and will henceforth produce annually about 80,000 tons of newsprint and 6,000 tons of specialty papers.

Elected vice presidents of the company were Philip Chandler, vice president and general manager of the Los Angeles Times, and Carl E. Braun, vice president and mill manager for Hawley.

The election was a part of an organization meeting called following purchase of the controlling interest in the Hawley company April 16 by Publishers Paper Co. and Blyth & Co.

Longer Felt Life Possible With New Cylinder Seal

A new type cylinder seal is offered by Cheney Bigelow Wire Works, Springfield, Mass., which it reports has given longer felt life on cylinder and wet machines, and also less fiber loss and contamination of white water.

The usual felt seal tends to brake the cylinder, according to Cheney Bigelow engineers, but the new type seal operates at much lower friction, hence eases the pull on the felt, reduces the stretch, and helps keep the felt open.

Because the Cheney Bigelow seal is a round neoprene reinforced seal, cylinder and vat rings of special design are required for its application. Vat chimes are furnished by Cheney Bigelow for installaton by the operators; chimes for head castings are installed by Cheney Bigelow on new and refinished cylinders.

New Marathon Building At Menasha, Wis.

A new, modern building to house ink manufacturing operations has been started by Marathon Corp. at Menasha, Wis., and will provide 28,000 square feet of floor space in a one story structure, 200 x 140 feet.

Designed for Long Use Without Repairs and Without Brooming of the Wood

Complete Details on Request

CARTHAGE MACHINE COMPANY

CARTHAGE, NEW YORK

Shredders - Grinders - Barkers - Chippers - Pumps - Wet Machines - Chip Screens and Crushers - Wood Washers Valves - Agitators - Sulphite Mill Machinery - Lead and Bronze Work Specialty

●

ENGINEERS AND BUILDERS of PULP AND PAPER MILL MACHINERY

Georgia Mill's Goal

AN INCREASED YIELD OF PULP

New construction along several lines—but all toward the end of greater yield per unit of wood—were taking place at Brunswick Pulp & Paper Co. when an editor of this publication visited the Georgia mill recently.

The modern mill began operations only in 1938, but there have been rather definite new developments in the Southern pulping industry since then—and not only has Brunswick kept abreast of them, but it has pioneered a few. The prosperous and pleasant little city of Brunswick, near which the mill is located, owes some of its growth and considerable of its present economic health to the several million dollar expansion program on which its relatively new pulp industry has embarked. That expansion, of course, has been made possible by the steadily rising demand for papers manufactured by Mead and Scott operations with which Brunswick Pulp and Paper Co. is affiliated.

Improvements now under way are varied. A new railway spur will make possible the location of the reserve wood supply directly adjacent to the mill and eliminate considerable handling that is now necessary when the reserve pile is being drawn upon. In connection with this wood handling improvement a new chain-belt conveyor is being constructed from the woodyard direct to a new chipper housing. A new 10-blade Carthage chipper is to replace the two 4-blade chippers now in use, although one of the latter will remain on base for reserve operations. A third Murray barking drum will be installed parallel with those now operating.

Also under construction is a new Allis-Chalmers 8x140 lime kiln. Almost ready to operate is the company's own SO_2 plant.

There is to be a sizable addition to the chip bin with four additional outlets. The foundation is in for one of three additional Blaw-Knox steel digesters. And work is going toward the completion stage on the new Combustion Engineering "225" recovery unit. The mill's waste disposal system is being improved.

The construction work is under the direction of Tidewater Construction Co., and new buildings, in addition to those structures for housing equipment mentioned above, include a welding shop, paint shop, and carpenter shop. A new laboratory building was recently completed.

Very important in the mill's program has been the digging of a fourth artesian well which has a capacity of 6,000,000 gallons daily. Like the water from the presently operating artesians this will be lime treated automatically, a process which eliminates some chemical treatments in the mill operations.

The new bleach plant, previously discussed in **PULP & PAPER**, is now in full operation. It is a six-stage process as follows: acid chlorination followed by acid wash; neutralization with caustic soda followed by wash; high density hypochlorite and wash; hot caustic extraction (two per cent caustic) at 150 to 180 degrees; high density hypochlorite and wash; and addition to stock of SO_2 as it goes to white stock chest. The new brown stock chests are by Stebbins and tile linings in the chlorine tower are Stebbins, as are the stock regulator and washer vat. Stock regulation is with DeZurik Shower Co. equipment from Sartell, Minn.

Among miscellaneous improvements in the mill has been new piping installations. Some of the acid water lines in sizes eight to 24 inches are rubber lined. A number of water lines have been made stainless steel by Carpenter or Esco tubings.

At the finishing end a new Kamyr press-flakt dryer will soon be in place.

Brunswick employs both pine and hardwoods (gum, oak) as raw materials, running about 68% softwood and the rest hardwood.

SCENES AT BRUNSWICK PULP & PAPER CO. Top, left: General view of mill from entrance road.

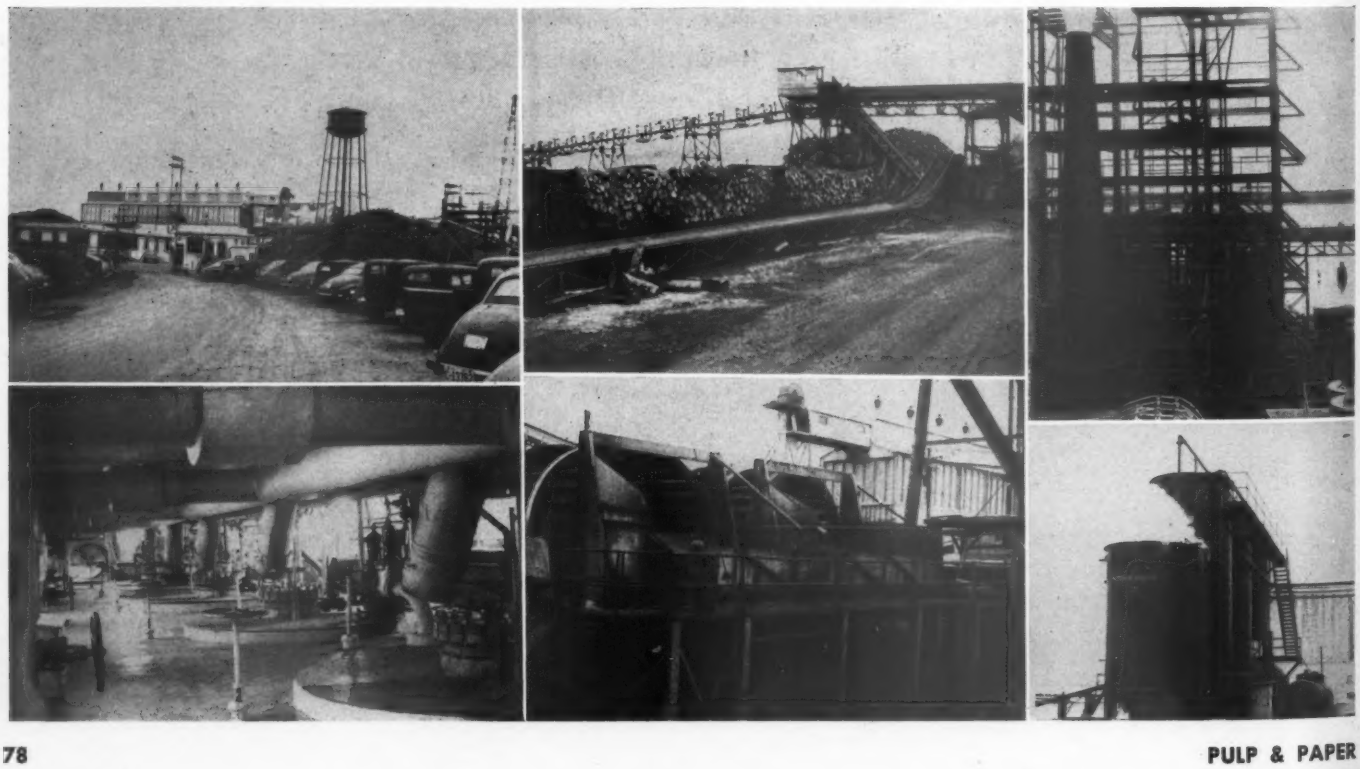
Top, middle: Conveyor leading to two chippers, which are being replaced with a new 10-blade Carthage chipper with one old machine held in reserve.

Top, right: Steel work almost completed on the new Combustion Engineering recovery unit. It is part of a several million dollar program designed to get more yield from a given unit of wood.

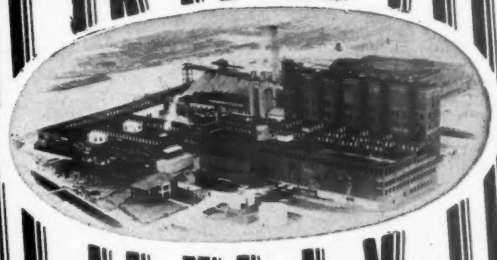
Lower, left: Digester control room; below window at far end foundations are in for one of three new Blaw-Knox digesters.

Lower, middle: Barking drums; a third Murray drum will be installed at right.

Lower, right: Recently constructed tall oil plant.



SOUNDVIEW



High Grade

BLEACHED SULPHITE PULP

SOUNDVIEW PULP COMPANY
EVERETT WASHINGTON

Downingtown Supplied All Equipment
IN TWO U. S. GYPSUM MILLS

An inclusive contract with U. S. Gypsum Co. was described by Enright A. Ellis, president of Downingtown Manufacturing Co. at the regular monthly meeting of the Allied Industries Luncheon Club at the Hotel Commodore, New York City, in May.

The contract discussed by Mr. Ellis was between U. S. Gypsum Co. and Downingtown and called for the complete erection—except for buildings—of two mills, one at Clark, N. J., and the other at South Gate, Los Angeles, Calif. The mills produce rock lath and roofing felt. (Last month **PULP & PAPER** reported the new 160-in. Downingtown machine at U. S. Gypsum's plant in South Gate is reputedly the biggest machine of its type on board).

The contract embodied equipment for the complete mill, including stock preparation, waste paper handling and preparation, machines, and winders. Suppliers to Downingtown in the contract included Moore & White, Sandy Hill Iron and Brass Works, Shartle Bros., J. O. Ross Engineering, Oliver United Filters, and many others.

Stock preparation included installation of Hydrapulpers and classifiners. Screen equipment consisted of 13 screens at the California mill and 15 at the New Jersey mill. Production at South Gate is 160 tons daily, although as high as 211 tons have been reached. The machines are unusual in several ways, one being the number of vats involved—10 as compared with the average of six on most board machines. There are eight suction rolls on each machine. The entire wet end of each machine is stainless steel. One mill required in the contract 136 motors, the other 254; one 65 centrifugal pumps, the other 56 pumps.

Mr. Ellis described the printing press in connection with the dry end of the machine, believed to be the only printing press tied in with a machine and running at the unusual speed of 1100 feet per minute. The machine prints, with rubber rolls, the U. S. Gypsum insignia on the rock lath.

Celanese Mill Construction Starts This Summer

First contracts for plant buildings at the Columbia Cellulose Co. site on Watson Island, near Prince Rupert, B. C., will be awarded late this summer, it was announced by representatives of the company following a visit to the coast by George Schneider, vice president in charge of research, Celanese Corp. of America, Columbia's parent company.

The Watson Island project will produce high grade sulfite pulp for Celanese at a rate of 200 to 250 tons a day. Capacity will probably be stepped up subsequently.

Mr. Schneider signed the forest management license which his company negotiated with the British Columbia government. E. T. Kenney, minister of lands and forests, signed for the government. The license was the first issued since the new forest management program of British Columbia went into effect last year.

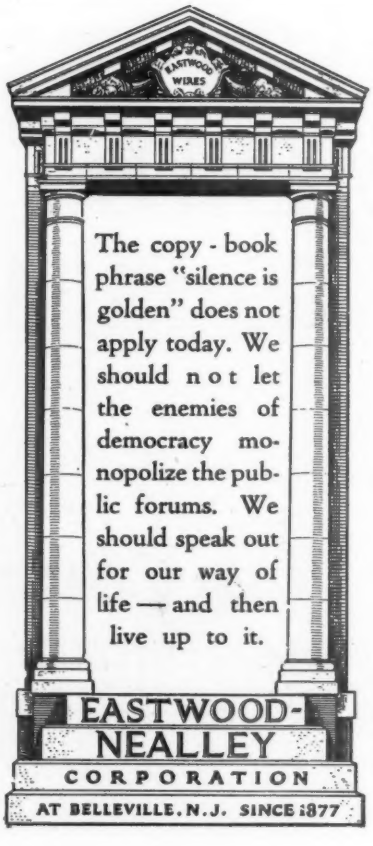
Celanese is given perpetual control over a vast tract of timber in the Skeena and Naas River basins said to approximate 2,000,000 acres provided that it develops it on a sustained yield basis and in conformity with forest service plans.

Heppenstall Knives Marked "Kelly" Green

To expedite identification by pulp and paper mill personnel, all chipper knives made by Heppenstall Co., Pittsburgh, are now being painted a "Kelly" green on the backs, edges and ends.

John P. Roche, vice president, announced that Heppenstall Co. recently noted the 20th anniversary of its installation of the first electric induction furnaces in the U. S. for production of steel ingots. The alloy steel chipper knives are made from these ingots.

H. J. McKENZIE, manager of Export Sales Co., Vancouver, B. C., representing Powell River Co. and Pacific Mills in trans-Pacific trade, flew to the Orient in May to make a survey of market conditions in China, Japan, Hongkong and the Malay Peninsula.


EASTWOOD WIRES
The copy - book phrase "silence is golden" does not apply today. We should not let the enemies of democracy monopolize the public forums. We should speak out for our way of life — and then live up to it.
EASTWOOD-NEALLEY
CORPORATION
AT BELLEVILLE, N.J. SINCE 1877

NEW EXECUTIVES of the Cameron Machine Co. of Brooklyn, N. Y., are announced (l. to r.): JOSEPH SCHEUERMANN, has been elected Vice President and also Vice President of Cameron Machine Co. of Canada, Ltd., and continues as Sales Manager; ROSS MEKEEL was elected Secretary and will continue as Purchasing Agent; TOM CARTER, formerly of the New Design Dept., has been appointed Chief Engineer. R. W. Cummings has resigned as Secretary of the company and after a 3-month vacation, will return to act as sales representative in the Southern states. E. J. Ward will take over Mr. Cummings' previous duties as Service Manager.

MacDonald Named Vice Pres. and Manager of New Company

Frank S. MacDonald becomes vice president and general manager of Homad Services, Ltd., 1445 Crescent St., Montreal, a new organization granted a Canadian charter to serve the pulp and paper industries with stock preparation systems, beating apparatus, improved Claflin refining, stock storage and mixing equipment.

Mr. MacDonald was recently with Sherbrooke Machineries, Ltd., and formerly with J. R. Booth, Ltd.

F. J. Hoar of Watertown, N. Y., is president of the new company. Mr. Hoar is also with G. D. Jenssen Co., Inc.

Plans for New Mill At Duncan Bay, B. C.

Plans of Canadian Western Lumber Co. and the associated interests planning to build a $30,000,000 pulp and newsprint mill at Duncan Bay, east coast of Vancouver Island, will probably be finalized within a few weeks. The proposed forest management license will probably be issued before mid-June.

President Henry Mackin emphasized it was planned to utilize at the proposed new mill only the debris from primary logging operations until such time as new forest growth included in the management license becomes available, in about 20 years.

Bixby of Hercules Tours Both Coasts in April

Milton M. Bixby, director of sales of Paper Makers Chemicals Dept., Hercules Powder Co., Wilmington, Del., and Fred G. Hogg, director of sales of naval stores for the same company, made a brief trip to the Pacific Coast in late April.

Just two weeks earlier Mr. Bixby made a trip to the Southeast Coast.

In California he and Mr. Hogg were joined by Milton J. Maguire, manager of the Portland, Ore., Hercules plant.

New Key Executives In Samuel M. Langston Co.

Samuel M. Langston Co. announces these changes through President Bryant W. Langston:

Karl Sieg, chief engineer and chief designer, retires in June after 28 years with the company.

William H. Cleaver, with the company since 1926 and Mr. Sieg's assistant, becomes chief designer.

Charles D. Nitchie becomes chief engineer. He has been with the company since 1945. During the war he was chief design engineer at Iowa Ordnance Plant, Burlington, Ia.

Edward J. Gillespie will be a new staff engineer. A 1936 graduate of Georgia Tech, he was with Champion Paper & Fibre Co. at Canton, N. C., and Goodrich Rubber Co., and served in the Navy on the battleships Texas and North Carolina, ending his services as chief engineer on the U.S.S. Huntington with rank of lieutenant commander.

NOBLE MFG. CO., Cedartown, Ga., has increased production from 15 tons per day to 20 tons per day. A modern gas burner fire box was installed in the power house. Plans call for a new wet end of the paper machine.

Jones Jordans Installed at Bucksport

The St. Regis Paper Co. at Buckaport, Me., has recently installed the second two of a total of four E. D. Jones Majestic jordans. The first two have been operating about a year on one machine, and the second two will handle the jordaning requirements for another machine. These machines are making book papers, each at a rate of about 145 tons per day.

The jordans are equipped with stainless steel Nowave filling and SKF spherical roller bearings. Motors are 350 hp. and drive the jordans directly, through Fast's telescopic couplings.

Waterous Ltd. on Coast

Waterous, Ltd., one of eastern Canada's important manufacturers of pulp mill and logging machinery, has established itself on the west coast through acquisition, for an undisclosed sum, of Heaps Engineering Ltd., New Westminster, B. C.

Alex B. Vasey, president of Waterous, Ltd., whose factory in the east is at Brantford, Ont., becomes president of the Heaps organization, with W. A. Harding, who is moving to the coast from Ontario, as vice president.

J. J. HERB, chairman of the board, Westminster Paper Company, New Westminster, B. C., is observing two important anniversaries this year—his sixtieth year of active service in the pulp and paper industry and the silver anniversary of Westminster Paper Co., which he founded in 1923. He is also president and general manager, Pacific Coast Paper Mills, Bellingham, Wash. His two sons are top executives of the two companies, Elmer M. at New Westminster and F. J. at Bellingham.

MOST SUCCESSFUL BOWLING season ever enjoyed by the employees of the Puget Sound Pulp and Timber Company ended in a thriller finish. In the last night of play, in the eight-team league, Woodroom keglers out-pointed the Board Mill, newest member of the group to take first spot. The Shipping Room held the honors for both high game and high series. Tied for top in individual high games were Carl Priest and Basil Lang, with 248 pins each, and Lang had a series high of 618.

M. J. FOLEY, who recently joined Powell River Co., as executive vice president, has been appointed a director.

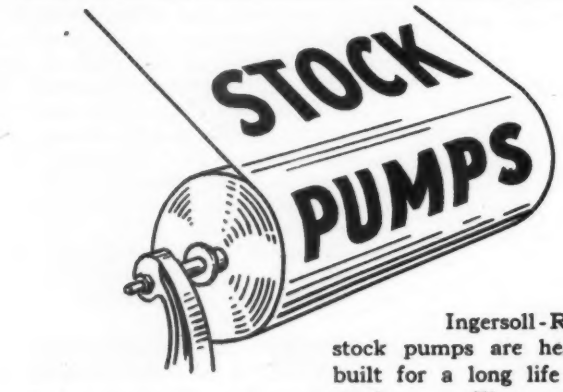
Pre-Peeled Spuds Packaged in Paper

Pre-peeled spuds are on the way for weary housewives and with them a new use for paper.

A new automatic "peeler" takes the skins off with steam pressure, after first washing the potatoes. Then they're sterilized to kill molds and bacteria and sprayed with a mild chemical to prevent discoloring. Sacked in 60-pound multi-wall paper bags, frying size potatoes sell for $5.67 a sack, boilers for $5.37. At present prices, this is about the same cost per potato-meal as unpeeled raw spuds at $6 a hundred pound sack.

A NEW HOME DISPENSER of paper cups has been introduced by Lily-Tulip Cup Corp. It is a white plastic $1.98 holder which houses 50-3½ ounce cups, retailing for 42 cents a hundred. The holder can be affixed to any type of surface from glass to wood.

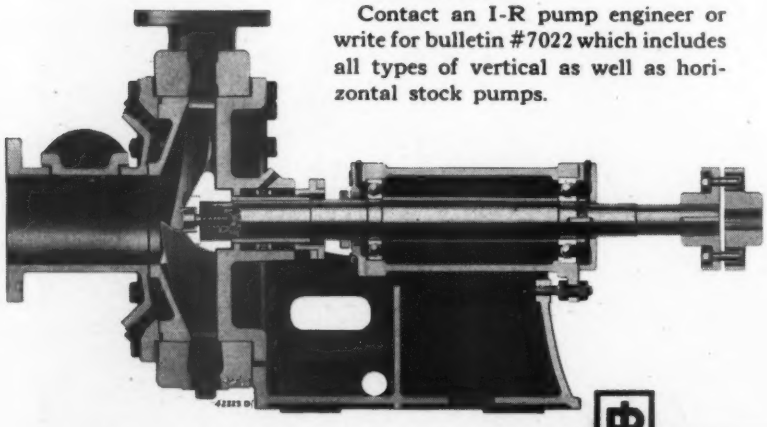
No longer will any modern kitchen or bathroom contain discolored, smudged, bacteria ridden glass, says the announcement.



Ingersoll-Rand horizontal stock pumps are heavy-duty units built for a long life of dependable service . . . These units are recommended for high consistency or unscreened stock . . . An open or closed impeller can be furnished with these pumps depending upon the service conditions.

For stock feed to the paper machine, the pumps may be equipped with an auxiliary feeder propeller and take-off in the suction nozzle to maintain a constant delivery regardless of the level of the stock.

Contact an I-R pump engineer or write for bulletin #7022 which includes all types of vertical as well as horizontal stock pumps.



Ingersoll-Rand
Cameron Pump Division
11 Broadway, New York 4, N. Y.
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AIR TOOLS · ROCK DRILLS
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CENTRIFUGAL PUMPS · CONDENSERS
OIL AND GAS ENGINES

WOODLANDS SUPERINTENDENT — Desires change. 13 years' forestry experience, 6 years in charge of land acquisition, management, and pulpwood production for large paper mill. Forestry graduate; 34 years of age. Reply Box 10, Pulp & Paper, 71 Columbia St., Seattle 4, Wash.

TIMBER!

4,300 acres, Northern Vermont. Estimated 20 million feet of timber, mostly birch, beech, maple. Well located for transportation and labor. Taxes favorable. Low cash price. Owner, Box 9, Pulp & Paper, 370 Lexington Ave., New York 17, New York.

Consummation of Sale Of Hawley Pulp & Paper Co.

The United States National Bank of Portland, as escrow holder under the stock purchase agreement between John H. Smith and other shareholders of common stock of Hawley Pulp and Paper Co., Oregon City, Ore., and Publishers' Paper Co. and Blyth & Co., Inc., as purchasers, recently mailed checks to those who deposited their stock in accordance with this agreement at the rate of $34.37 per share, representing the cash purchase price of $35.25 per share less commission and costs of 88c per share.

The total sale price was $39.00 per share, and the remaining $3.75 per share representing the deferred payment is payable by the purchasers on or before March 15, 1956.

There were 200,000 shares of Hawley Pulp and Paper Co. common stock outstanding, owned by 660 stockholders. Of this amount, 188,072 shares were deposited under the stock purchase agreement by 579 stockholders. The addresses of about half of the 81 remaining stockholders are unknown to the bank, which is the transfer agent of the stock.

The amount of the cash purchase price which is being disbursed by the bank is $6,629,548.47.

The U. S. National Bank also mailed a letter to the second preferred stockholders of the Hawley company advising that after Apr. 21, 1948, the second preferred stock might be presented for redemption at the call price of $102.50 per share, plus the $1.50 per share dividend which normally would be paid on July 1, 1948.

GEORGE H. RICHARDS, vice president and treasurer of Celanese Corp. of America, has been elected to the board of directors. He joined the company in 1941 at the time of the merger with Celluloid Corp., with which he had been associated several years.

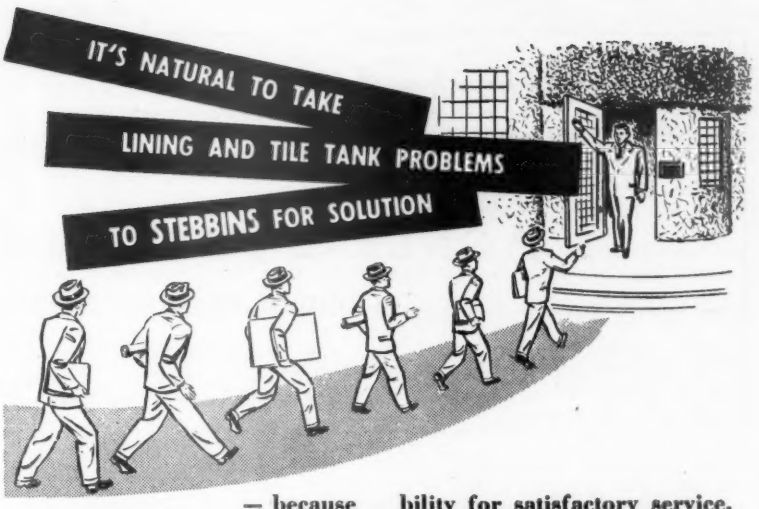
U. S. Pulp Supply Increases in 1948

New pulp supply for U. S. paper mills, provided out of domestic production and imports in the opening quarter of 1948 exceeded last year's record of 10% or 326,000 tons, it is pointed out by Fred Stevenot, president of Puget Sound Pulp & Timber Co.

U. S. pulp production amounted to 3,107,000 tons during the first quarter of 1948, against 2,922,000 tons in the 1947 period an increase of 6%. Production of chemical pulps increased substantially, but manufacture of mechanical pulp, important in newsprint, was lower this year, 486,000 tons against 516,000 tons.

Imported pulp totaled 611,000 tons in the first three months of 1948, comparing with 470,000 tons in the 1947 first quarter, an increase of 30%. Finland shipped 49,500 tons more than it did a year ago, and Sweden, 41,000 tons more.

EARNINGS OF INTERNATIONAL PAPER CO. and its subsidiaries for the first quarter of 1948 amount to $13,313,408 or $3.68 per share of common stock after providing for dividends on the $4 preferred stock.



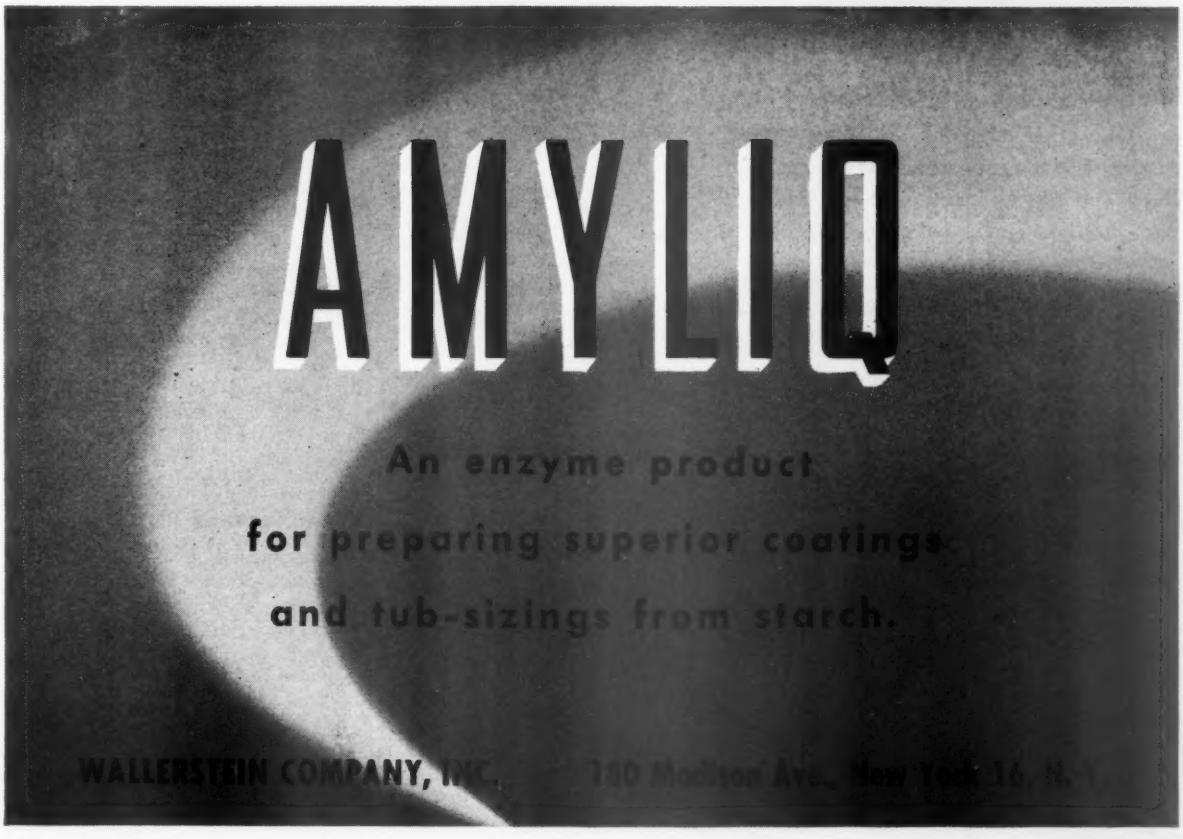
— because over 80% of all chemical pulp made on this continent is processed at some stage of its manufacture in equipment built or lined by STEBBINS.

Most important, each job is done under a lump-sum contract, providing one responsibility for satisfactory service.

As the pulp and paper industry passes from a buyers to a sellers market — remember "SEMCO" quality is real economy.

Be natural, consult STEBBINS on your next lining or tile tank job.

SEMCO
Stebbins Engineering Corporation
TEXTILE TOWER SEATTLE 1, WASHINGTON



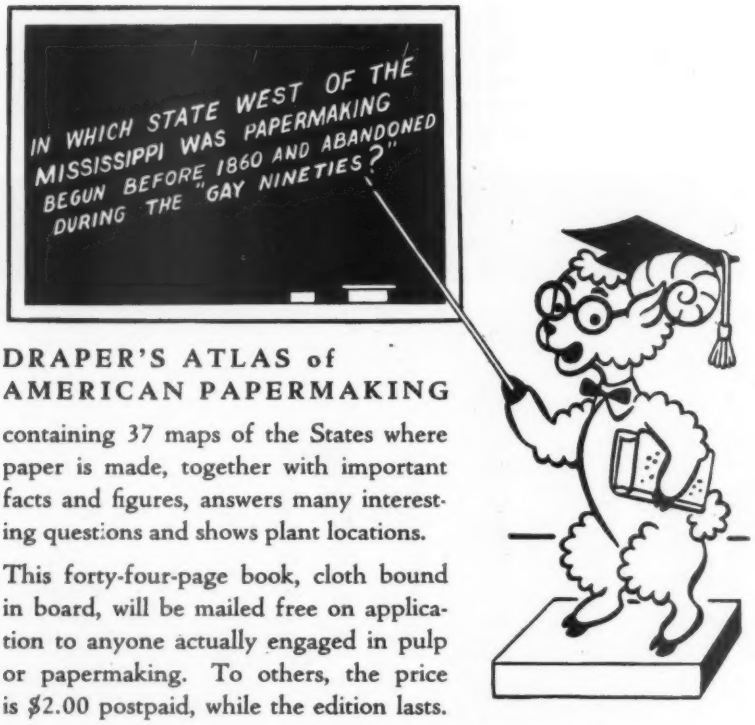
A neighborhood firm
exporting Northwest pulp and paper

AGNER & FREDRICKSON CO.

Colman Bldg. Seattle 4

Established in Seattle since 1925

What do you know about Paper?



DRAPER'S ATLAS of AMERICAN PAPERMAKING

containing 37 maps of the States where paper is made, together with important facts and figures, answers many interesting questions and shows plant locations.

This forty-four-page book, cloth bound in board, will be mailed free on application to anyone actually engaged in pulp or papermaking. To others, the price is $2.00 postpaid, while the edition lasts.

The DRAPER Felt

DRAPER BROTHERS COMPANY

Woolen Manufacturers Since 1856

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L. L. GRIFFITHS, Jr., Kalamazoo, Mich.

Answer to Question No. 3 In the State of Utah

Packaging Booklet Available From Union Pacific

Based on the success of a folder entitled "If It's Worth Shipping, It's Worth Packaging Right" of which 30,000 copies were distributed last year, Union Pacific railroad today is in the process of mailing to traffic managers, receivers and railroad agencies a second edition.

O. J. Wullstein, Union Pacific general freight claim agent, at Omaha said that the new edition, which has been expanded into a booklet, bears the same title. It is expected that distribution will reach at least 35,000.

Copies of the booklet may be obtained from Union Pacific traffic representatives or by writing to Mr. Wullstein, Union Pacific railroad, 1416 Dodge St., Omaha 2, Neb.

New Jones Agitator

A new propeller-type agitator, designed to agitate materials having consistencies up to 4% is being manufactured by E. D. Jones & Sons Co., Pittsfield, Mass. Anchored in the wall of any chest or tank this cartridge type unit is complete and compact. Literature upon request to E. D. Jones & Sons Co., Pittsfield, Mass.

Australians in U. S.

S. L. Kessell, managing director, Australian Newsprint Mills, Boyer, Tasmania, accompanied by R. W. Henry, deputy general superintendent, were arriving in San Francisco by plane in mid-May to visit pulp and paper mills in the Pacific Northwest. They plan to spend two weeks in Vancouver, B. C., where equipment for their mill is being manufactured by Canadian Sumner Iron Works.